

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLVH431ACDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	0 to 70	(Y3PG, Y3PJ, Y3PU)	Samples
TLVH431ACDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	0 to 70	(Y3PG, Y3PJ, Y3PU)	Samples
TLVH431ACDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y3PS, Y3PU)	Samples
TLVH431ACDBZRG4	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	0 to 70	Y3PS	Samples
TLVH431ACDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y3PS, Y3PU)	Samples
TLVH431ACDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	0 to 70	YPU	Samples
TLVH431ACDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	0 to 70	YPU	Samples
TLVH431ACLP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	0 to 70	ZA431A	
TLVH431ACLPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	0 to 70	ZA431A	Samples
TLVH431ACPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	0 to 70	W2	Samples
TLVH431AIDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	(Y3TJ, Y3TU)	Samples
TLVH431AIDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	(Y3TJ, Y3TU)	Samples
TLVH431AIDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y3T3, Y3TS, Y3TU)	Samples
TLVH431AIDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y3TS, Y3TU)	Samples
TLVH431AIDBZTG4	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	Y3TS	Samples
TLVH431AIDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 85	YTU	Samples
TLVH431AIDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 85	YTU	Samples
TLVH431AILP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	-40 to 85	ZB431A	
TLVH431AILPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	-40 to 85	ZB431A	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLVH431AIPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 85	W3	Samples
TLVH431AQDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 125	(Y3NJ, Y3NS, Y3NU)	Samples
TLVH431AQDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 125	(Y3NJ, Y3NU)	Samples
TLVH431AQDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y3NS, Y3NU)	Samples
TLVH431AQDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y3NS, Y3NU)	Samples
TLVH431AQDBZTG4	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	Y3NS	Samples
TLVH431AQDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YNU	Samples
TLVH431AQDCKRG4	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YNU	Samples
TLVH431AQDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YNU	Samples
TLVH431AQLP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	-40 to 125	ZD431A	
TLVH431AQLPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	-40 to 125	ZD431A	Samples
TLVH431AQPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 125	VD	Samples
TLVH431BCDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	0 to 70	(Y3JJ, Y3JU)	Samples
TLVH431BCDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	0 to 70	(Y3JJ, Y3JU)	Samples
TLVH431BCDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y3J3, Y3JS, Y3JU)	Samples
TLVH431BCDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y3JS, Y3JU)	Samples
TLVH431BCDBZTG4	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	0 to 70	Y3JS	Samples
TLVH431BCDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	0 to 70	YHU	Samples
TLVH431BCDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	0 to 70	YHU	Samples
TLVH431BCLP	ACTIVE	TO-92	LP	3	1000	RoHS & Green	SN	N / A for Pkg Type	0 to 70	ZA431B	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLVH431BCLPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	0 to 70	ZA431B	Samples
TLVH431BCPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	0 to 70	V7	Samples
TLVH431BIDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	(Y3KJ, Y3KS, Y3KU)	Samples
TLVH431BIDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	(Y3KJ, Y3KU)	Samples
TLVH431BIDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y3K3, Y3KS, Y3KU)	Samples
TLVH431BIDBZRG4	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	Y3KS	Samples
TLVH431BIDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y3KS, Y3KU)	Samples
TLVH431BIDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 85	YJU	Samples
TLVH431BIDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 85	YJU	Samples
TLVH431BILP	ACTIVE	TO-92	LP	3	1000	RoHS & Green	SN	N / A for Pkg Type	-40 to 85	ZB431B	Samples
TLVH431BILPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	-40 to 85	ZB431B	Samples
TLVH431BIPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 85	V8	Samples
TLVH431BQDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 125	(Y3LJ, Y3LU)	Samples
TLVH431BQDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 125	(Y3LJ, Y3LU)	Samples
TLVH431BQDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y3LS, Y3LU)	Samples
TLVH431BQDBZRG4	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	Y3LS	Samples
TLVH431BQDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y3LS, Y3LU)	Samples
TLVH431BQDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YKU	Samples
TLVH431BQDCKRG4	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YKU	Samples
TLVH431BQDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YKU	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLVH431BQLP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	-40 to 125	ZD431B	
TLVH431BQLPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	-40 to 125	ZD431B	Samples
TLVH431BQPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 125	V9	Samples
TLVH431CDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	0 to 70	(Y3UJ, Y3US, Y3UU)	Samples
TLVH431CDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	0 to 70	(Y3UJ, Y3UU)	Samples
TLVH431CDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y3US, Y3UU)	Samples
TLVH431CDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y3US, Y3UU)	Samples
TLVH431CDBZTG4	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	0 to 70	Y3US	Samples
TLVH431CDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	0 to 70	YUU	Samples
TLVH431CLP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	0 to 70	ZA431	
TLVH431CLPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	0 to 70	ZA431	Samples
TLVH431CPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	0 to 70	W4	Samples
TLVH431IDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	(Y3VJ, Y3VS, Y3VU)	Samples
TLVH431IDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 85	(Y3VJ, Y3VU)	Samples
TLVH431IDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y3VS, Y3VU)	Samples
TLVH431IDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y3VS, Y3VU)	Samples
TLVH431IDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 85	YVU	Samples
TLVH431IDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 85	YVU	Samples
TLVH431ILP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	-40 to 85	ZB431	
TLVH431ILPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	-40 to 85	ZB431	Samples
TLVH431IPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 85	W5	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLVH431QDBVR	ACTIVE	SOT-23	DBV	5	3000	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 125	(Y3MJ, Y3MS, Y3MU)	Samples
TLVH431QDBVT	ACTIVE	SOT-23	DBV	5	250	RoHS & Green	NIPDAU SN	Level-1-260C-UNLIM	-40 to 125	(Y3MJ, Y3MU)	Samples
TLVH431QDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y3MS, Y3MU)	Samples
TLVH431QDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y3MS, Y3MU)	Samples
TLVH431QDBZTG4	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	Y3MS	Samples
TLVH431QDCKR	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YMU	Samples
TLVH431QDCKRG4	ACTIVE	SC70	DCK	6	3000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YMU	Samples
TLVH431QDCKT	ACTIVE	SC70	DCK	6	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM	-40 to 125	YMU	Samples
TLVH431QLP	OBSOLETE	TO-92	LP	3		TBD	Call TI	Call TI	-40 to 125	ZD431	
TLVH431QLPR	ACTIVE	TO-92	LP	3	2000	RoHS & Green	SN	N / A for Pkg Type	-40 to 125	ZD431	Samples
TLVH431QPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 125	VC	Samples
TLVH432ACDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y2ES, Y2EU)	Samples
TLVH432ACDBZRG4	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	0 to 70	Y2ES	Samples
TLVH432ACDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y2ES, Y2EU)	Samples
TLVH432AIDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y2FS, Y2FU)	Samples
TLVH432AIPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 85	VL	Samples
TLVH432AQDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y2GS, Y2GU)	Samples
TLVH432AQDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y2GS, Y2GU)	Samples
TLVH432BCDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y2HS, Y2HU)	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLVH432BCDBZRG4	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	0 to 70	Y2HS	Samples
TLVH432BCPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	0 to 70	VN	Samples
TLVH432BIDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y2JS, Y2JU)	Samples
TLVH432BQDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y2KS, Y2KU)	Samples
TLVH432BQDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y2KS, Y2KU)	Samples
TLVH432BQDBZTG4	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	Y2KS	Samples
TLVH432CDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y2AS, Y2AU)	Samples
TLVH432CDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	0 to 70	(Y2AS, Y2AU)	Samples
TLVH432CPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	0 to 70	VG	Samples
TLVH432IDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 85	(Y2BS, Y2BU)	Samples
TLVH432QDBZR	ACTIVE	SOT-23	DBZ	3	3000	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y2DS, Y2DU)	Samples
TLVH432QDBZT	ACTIVE	SOT-23	DBZ	3	250	RoHS & Green	NIPDAU SN NIPDAUAG	Level-1-260C-UNLIM	-40 to 125	(Y2DS, Y2DU)	Samples
TLVH432QPK	ACTIVE	SOT-89	PK	3	1000	RoHS & Green	SN	Level-2-260C-1 YEAR	-40 to 125	VJ	Samples

(1) The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSELETE: TI has discontinued the production of the device.

(2) **RoHS:** TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".

RoHS Exempt: TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.

Green: TI defines "Green" to mean the content of Chlorine (Cl) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of ≤ 1000 ppm threshold. Antimony trioxide based flame retardants must also meet the ≤ 1000 ppm threshold requirement.

- (3) MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.
- (4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.
- (5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.
- (6) Lead finish/Ball material - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

Important Information and Disclaimer: The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

OTHER QUALIFIED VERSIONS OF TLVH431A, TLVH431B :

- Automotive : [TLVH431A-Q1](#), [TLVH431B-Q1](#)
- Enhanced Product : [TLVH431B-EP](#)

NOTE: Qualified Version Definitions:

- Automotive - Q100 devices qualified for high-reliability automotive applications targeting zero defects
- Enhanced Product - Supports Defense, Aerospace and Medical Applications