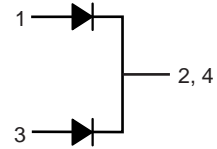
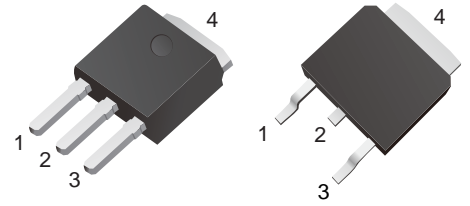


Schottky Barrier Rectifiers

Features

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical data

- Case: TO-251 / TO-252
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".

Ordering Information

Part Number	Shipping	Reel
LTM1040VT THRU LTM10200VT-TR2K5	75PCS/Tube	Tube
LTM1040DT THRU LTM10200DT-TR2K5	2500PCS Tape&Reel	13 inches

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Parameter	TO-251	LTM1040VT	LTM1045VT	LTM1060VT	LTM10100VT	LTM10150VT	LTM10200VT	Units
	TO-252	LTM1040DT	LTM1045DT	LTM1060DT	LTM10100DT	LTM10150DT	LTM10200DT	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	32	42	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	45	60	100	150	200	V
Maximum Average Forward Rectified Current Per leg Per device	$I_{F(AV)}$	5 10						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)(Per leg)	I_{FSM}	100						A
Max Instantaneous Forward Voltage at 5 A DC per leg	V_F	0.70		0.75	0.85	0.90	0.92	V
Maximum DC Reverse Current $T_J = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_J = 125^\circ\text{C}$	I_R	0.1 20			0.05 20			mA
Typical Junction Capacitance ⁽¹⁾	C_j	300		200				pF
Typical Thermal Resistance	$R_{\theta JC}^{(2)}$ $R_{\theta JA}$	2.0 53						$^\circ\text{C/W}$
Operating Junction Temperature Range	T_j	-55 ~ +150				-55 ~ +175		$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150				-55 ~ +175		$^\circ\text{C}$

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 15cmX15cmX2mm copper pad areas.



Characteristic Curves

Fig.1 Typical Forward Current Derating Curve

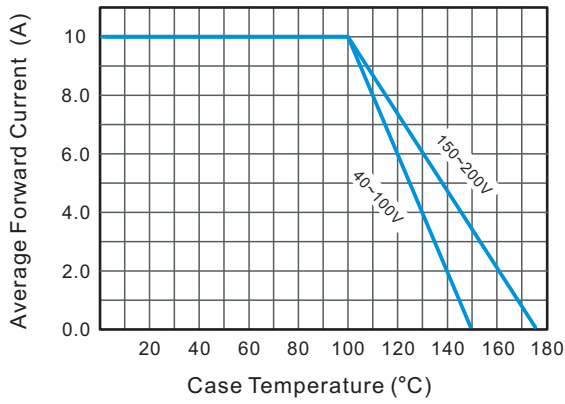


Fig.2 Typical Reverse Characteristics

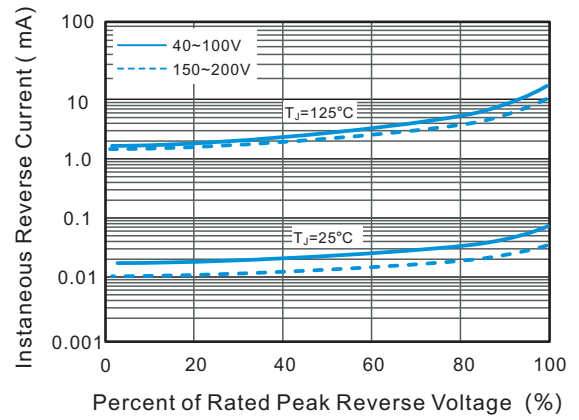


Fig.3 Typical Forward Characteristics

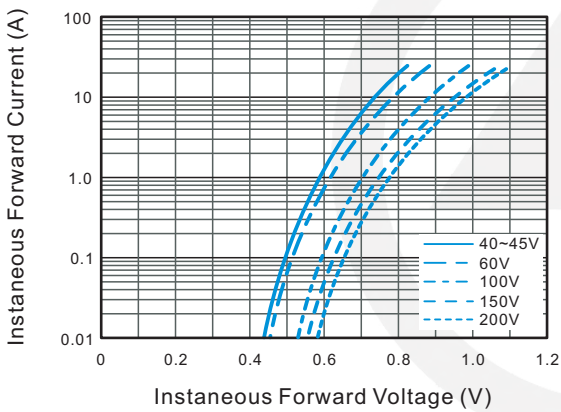


Fig.4 Typical Junction Capacitance

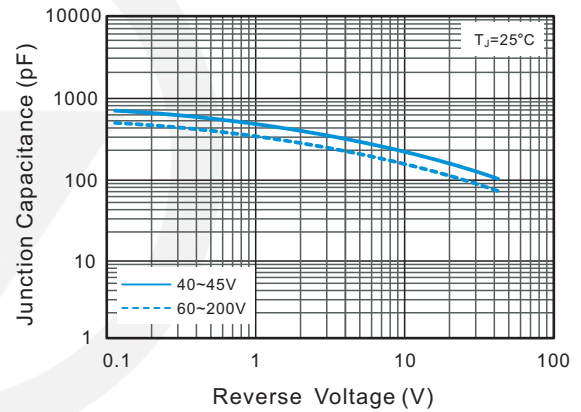


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

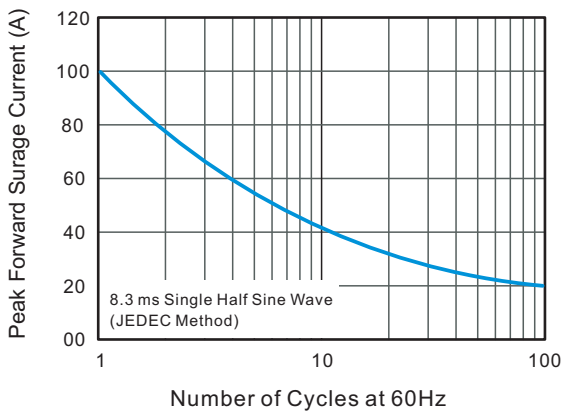
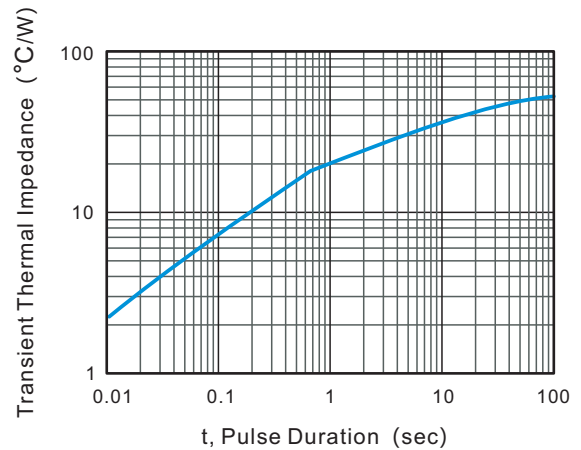
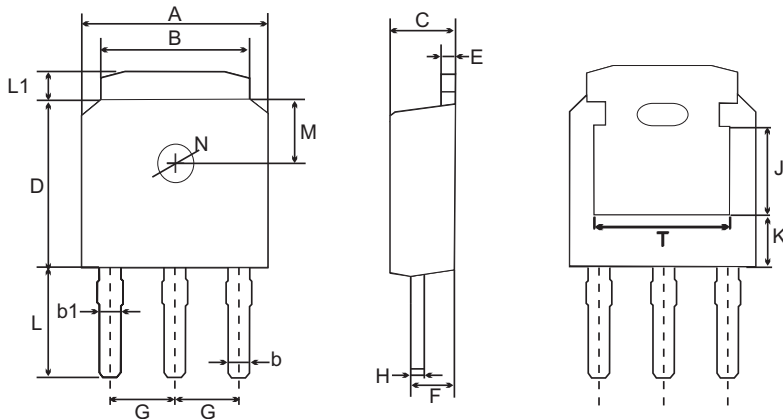


Fig.6 Typical Transient Thermal Impedance





TO-251 Package Outline

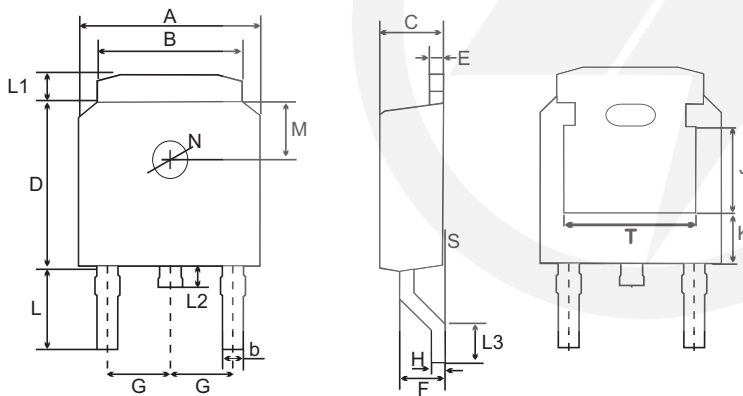


UNIT	A	B	b	b1	C	D	E	F	G	H	L	L1	M	N	J	T	K	
mm	max	6.7	5.5	0.8	0.9	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	4.3	1.2	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	typ	6.6	5.3	0.7	0.8	2.3	6.1	0.5	1.5		0.5	4.1	1.0					
	min	6.3	5.1	0.3	0.76	2.1	5.9	0.4	1.3		0.45	3.9	0.8					

Marking

Type number	Marking code
LTM1040VT	MBR1040VT
LTM1045VT	MBR1045VT
LTM1060VT	MBR1060VT
LTM10100VT	MBR10100VT
LTM10150VT	MBR10150VT
LTM10200VT	MBR10200VT

TO-252 Package Outline



UNIT	A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T	
mm	max	6.7	5.5	0.8	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.23	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	typ	6.5	5.3	0.65	2.3	6.1	0.5	1.5		0.50	2.9	1.0	0.8	1.30	0.15					
	min	6.3	5.1	0.5	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.00	0.0					

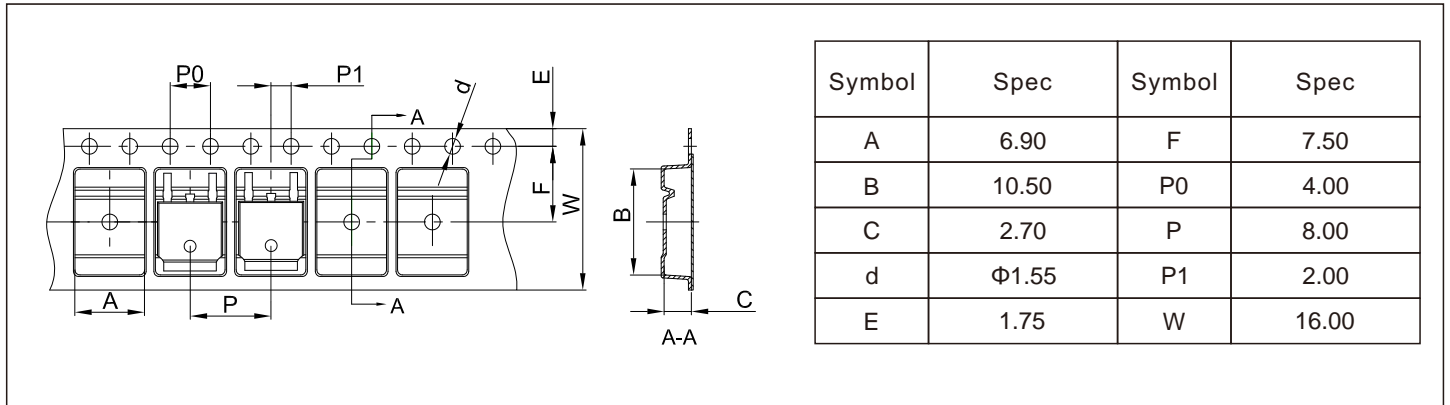
Marking

Type number	Marking code
LTM1040DT	MBR1040DT
LTM1045DT	MBR1045DT
LTM1060DT	MBR1060DT
LTM10100DT	MBR10100DT
LTM10150DT	MBR10150DT
LTM10200DT	MBR10200DT



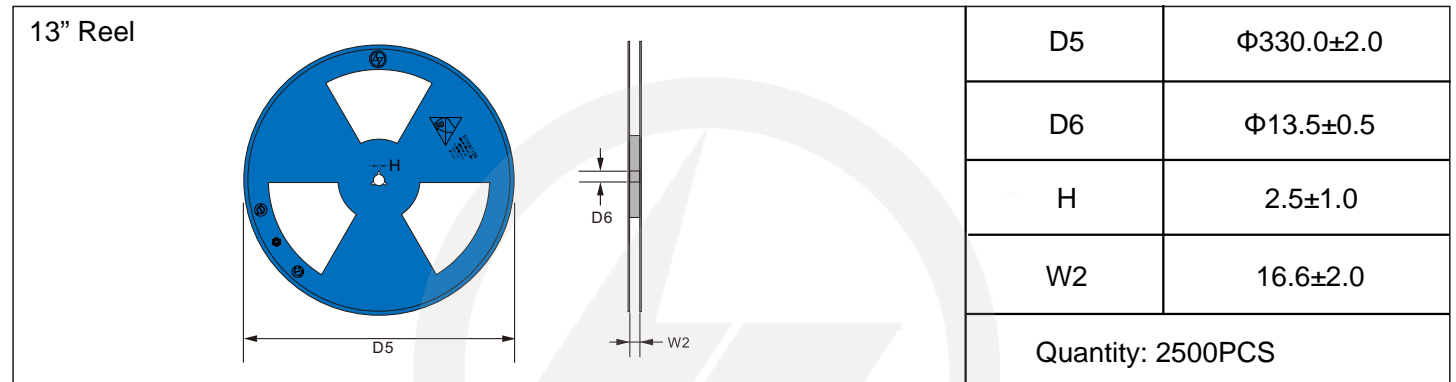
Carrier Tape Dimensions

Unit : mm

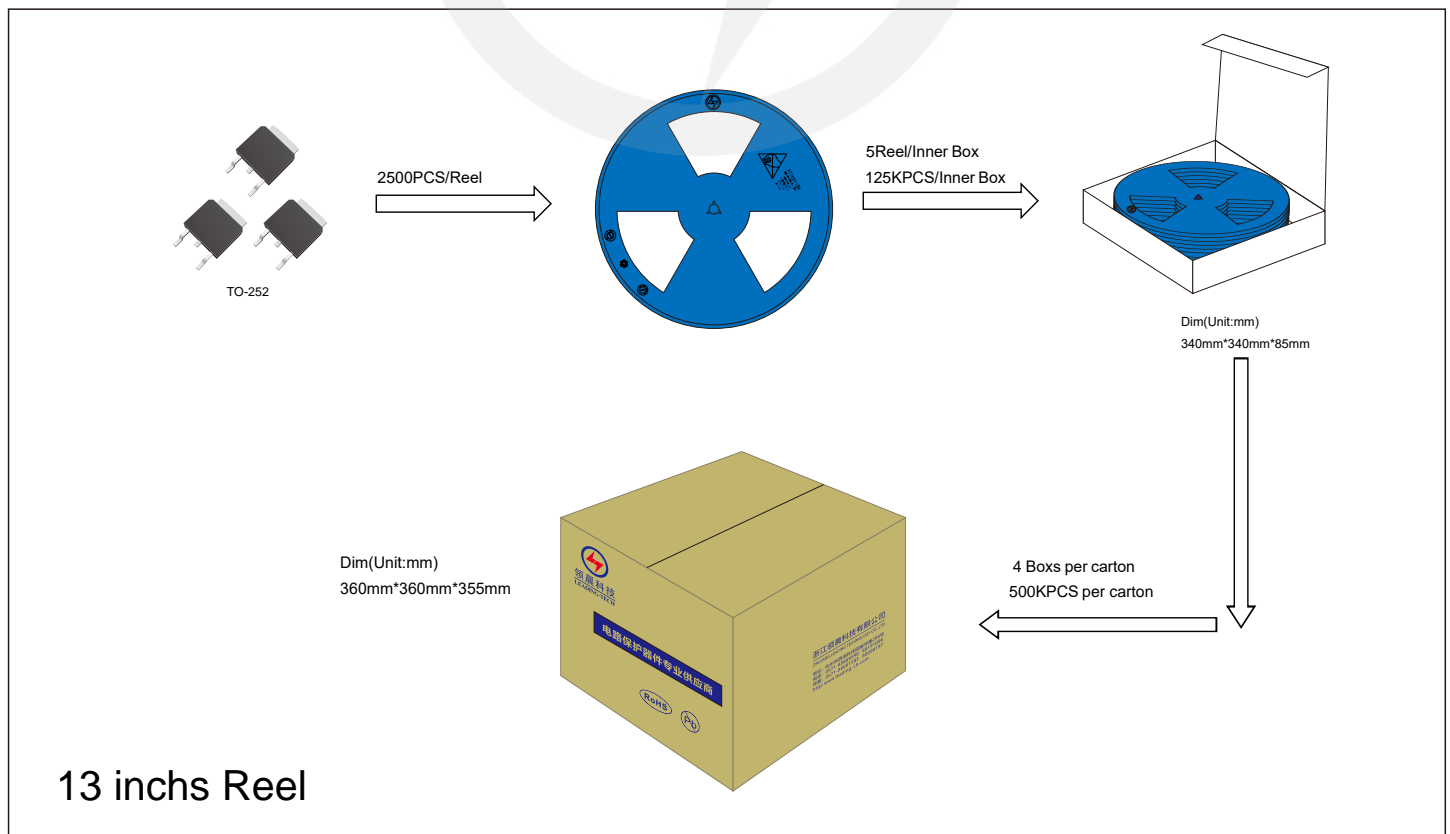


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Important Notice and Disclaimer

Leading-Tech reverses the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Leading-Tech makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Leading-Tech assume any liability for application assistance or customer product design.

Leading-tech does not warrant or accept any liability with products which are purchase or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Leading-Tech.

Leading-Tech products are not authorized for use as critical components in life support devices or systems without express written approval of Leading-tech.

Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.12.30	2024.12.30	3.0	New File	/	Ding	