MBRD1545CT

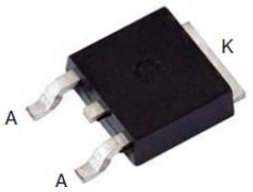
Schottky Barrier Rectifier

Reverse Voltage 45 Volts Forward Current 15 Amperes

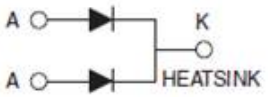
Features

- Plastic package has underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center tap
- Metal of silicon rectifier, majority carrier conduction
- Low forward voltage, high efficiency
- Guarding for over voltage protection

TO-252 (D-PAK)



Package: TO-252(D-PAK)



Mechanical Data

- Case: Epoxy, Molded
- Weight: 0.4grams（approximately）
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Max. for 10 sec
- Shipped 2500 units per reel

Maximum Ratings & Electrical Characteristics

(T_A=25℃ unless otherwise noted)

PARAMETER	TEST CONDITIONS		SYMBOL	MBRD1545CT	UNIT
Maximum repetitive peak reverse voltage			V_{RRM}	45	V
Working peak reverse voltage			V_{RWM}	45	V
Maximum DC blocking voltage			V_{DC}	45	V
Maximum average forward rectified current at T_C=105°C total device per diode			I_F(AV)	15 7.5	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode			I_{FSM}	125	A
Peak repetitive reverse current per leg at t_p=2.0us ,1KHz			I_{RRM}	1.0	A
Voltage rate of change（rated V_R）			$D_{V/dt}$	10000	V/us
Operating junction temperature range			T_J	—55 to+150	°C
Storage temperature range			T_{STG}	—55 to+150	°C
Maximum instantaneous forward voltage per leg	I_F=7.5A I_F=7.5A	T_C=25℃ T_C=125℃	V_F	0.52 0.47	V
Maximum reverse current per leg at working peak Reverse voltage		T_J=25℃ T_J=100°C	I_R	200 15	uA mA

Thermal Characteristics T_A=25℃ unless otherwise noted

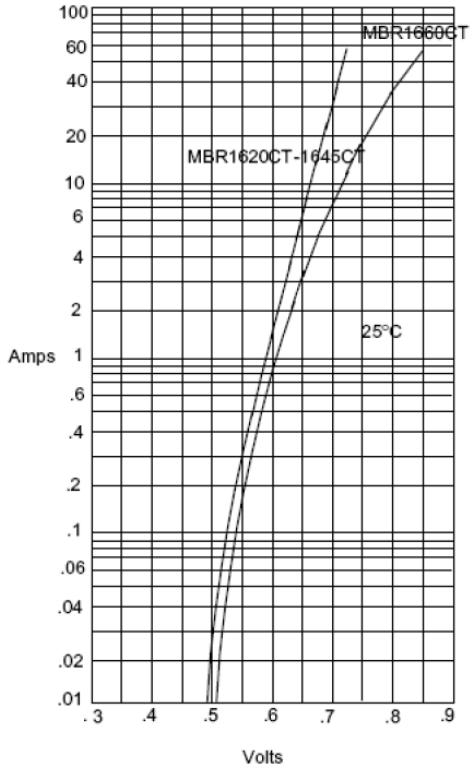
Symbol	Parameter	TYP（TO-252）	Unit
RθJC	Thermal Resistance, Junction to Case per Leg	3.5	°C /W
RθJA	Thermal Resistance, Junction to Ambient per Leg	62.5	°C /W

Note：Pulse test:300us pulse width, duty cycle=2%

Ratings and Characteristics Curves

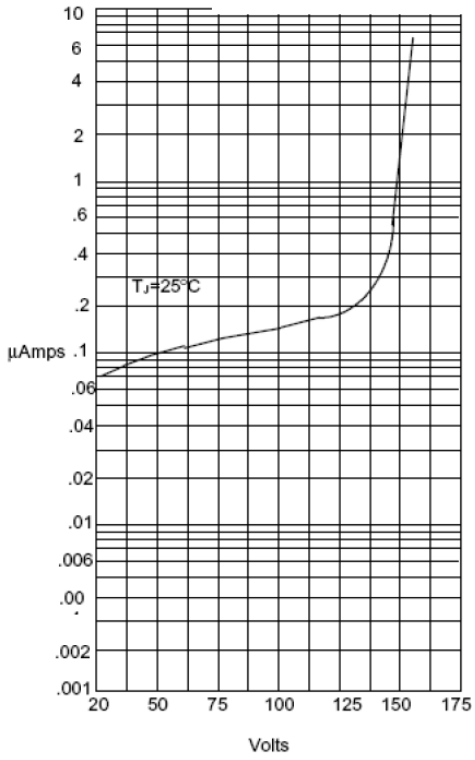
(T_A = 25℃ unless otherwise noted)

Figure 1
Typical Forward Characteristics



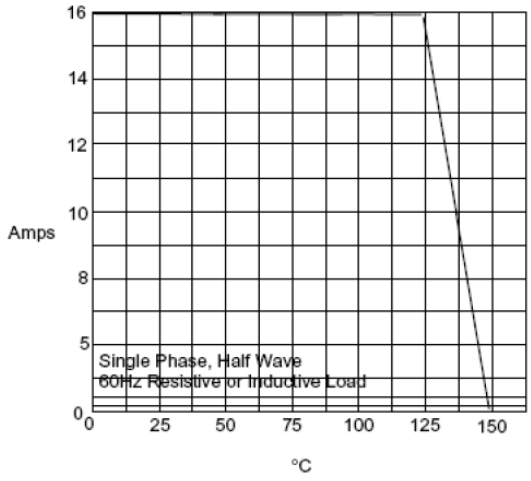
Instantaneous Forward Current - Amperes*versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Revers



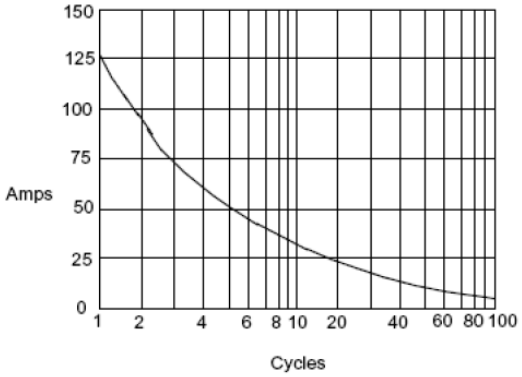
Instantaneous Reverse Leakage Current - MicroAmperes*versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes*versus*
Ambient Temperature -°C

Figure 4
Peak Forward Surge Current

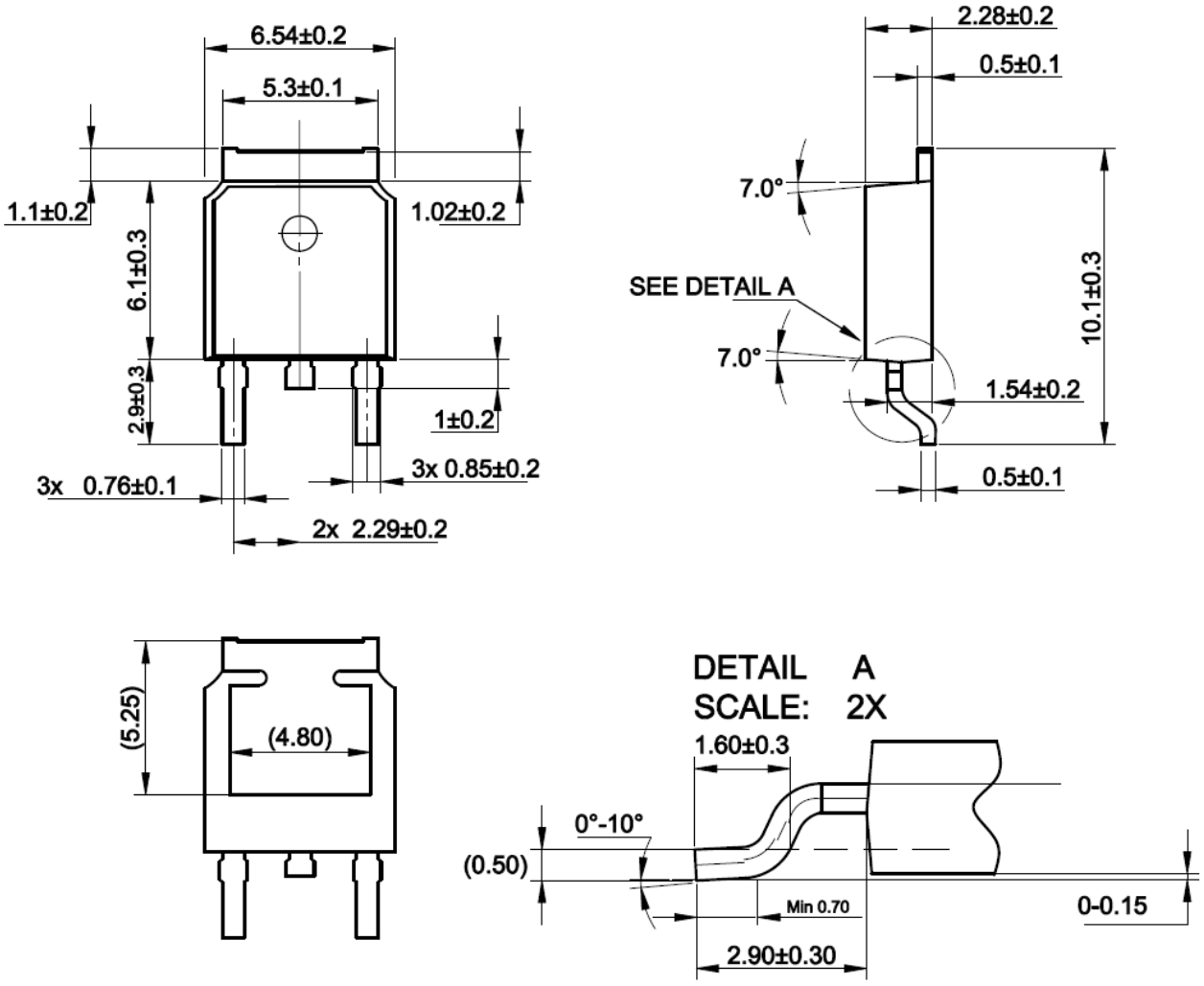


Peak Forward Surge Current - Amperes*versus*
Number Of Cycles At 60Hz - Cycles

Package Outline Dimensions

Unit: millimeters

TO-252(D-PAK)



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