

FEATURES

- | High speed switching capability
- | High current capability
- | High forward surge capability
- | Low power losses, High efficiency
- | High reliability
- | For use in low voltage, high frequency inverters

MECHANICAL DATA

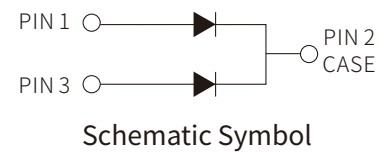
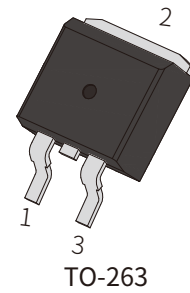
- | Fast recovery diode, mainly used for rectification, used in high-power equipment, The express and ultrafast recovery diodes are suitable for high frequency and ultra high frequency circuits, respectively

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Value	Unit
Marking		MUR1660DC	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	600	V
Working Peak Reverse Voltage	V _{RWM}	600	
Maximum DC Blocking Voltage	V _{DC}	600	
Maximum Average Forward Rectified Current	Per Leg	I _O	A
	Total		
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	160	A
Typical Thermal Resistance (Note1)	R _{θJC}	2	°C/W
Operating Temperature Range	T _J	175	°C
Storage Temperature Range	T _{STG}	-40 to +175	°C



ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage Drop(Note2)	V_F	$I_F=5\text{A}, T_A=25^{\circ}\text{C}$		1.29		V
		$I_F=5\text{A}, T_A=125^{\circ}\text{C}$		1.16		
		$I_F=8\text{A}, T_A=25^{\circ}\text{C}$		1.41	1.6	
		$I_F=8\text{A}, T_A=25^{\circ}\text{C}$		1.30		
Maximum Reverse Current	I_R	$V_R=600\text{V}, T_A=25^{\circ}\text{C}$		0.1	3	μA
		$V_R=600\text{V}, T_A=125^{\circ}\text{C}$		1.2		μA
Maximum Reverse Recovery Time	T_{rr}	$I_F=0.5\text{A}, I_R=1\text{A}$		32	35	ns

Notes :

1. Thermal resistance from Junction to case per leg mounted on heatsink.
2. Pulse test: 300 μs pulse width, 1 % duty cycle

CHARACTERISTIC CURVES

Fig. 1- Maximum Forward Current Derating Curve

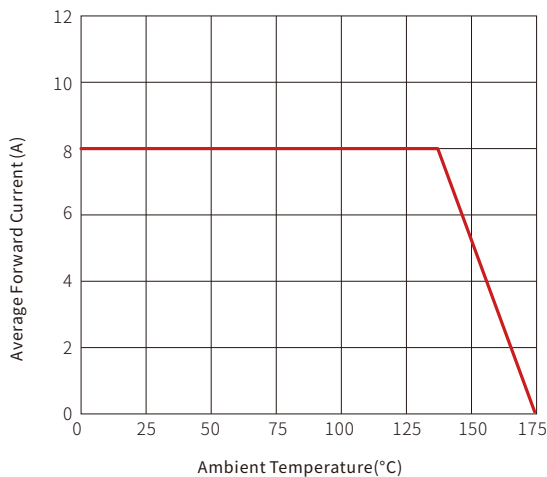


Fig. 2- Maximum Non-Repetitive Forward Surge Current Per Leg

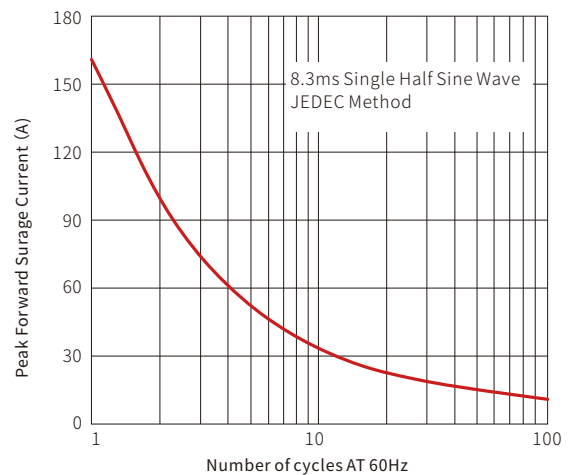
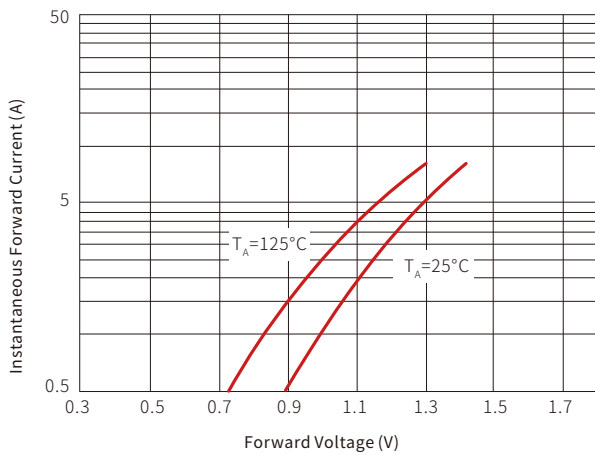
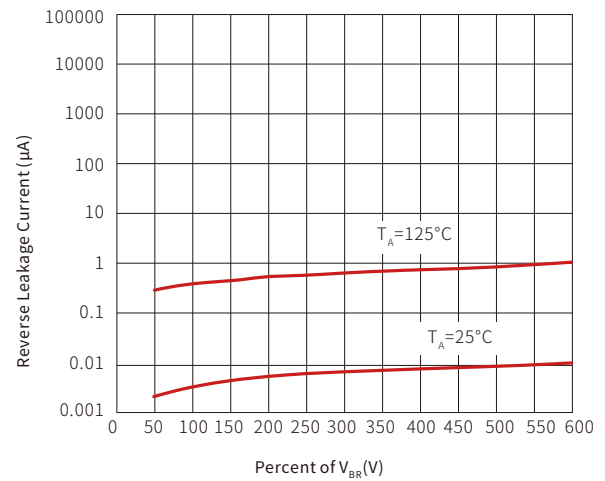
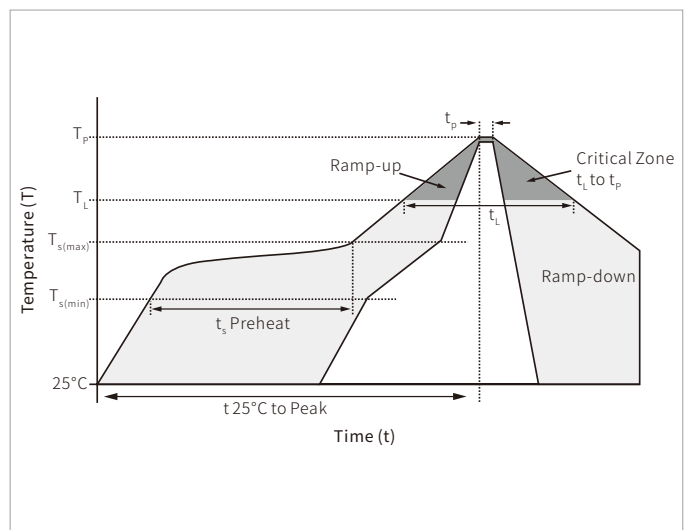


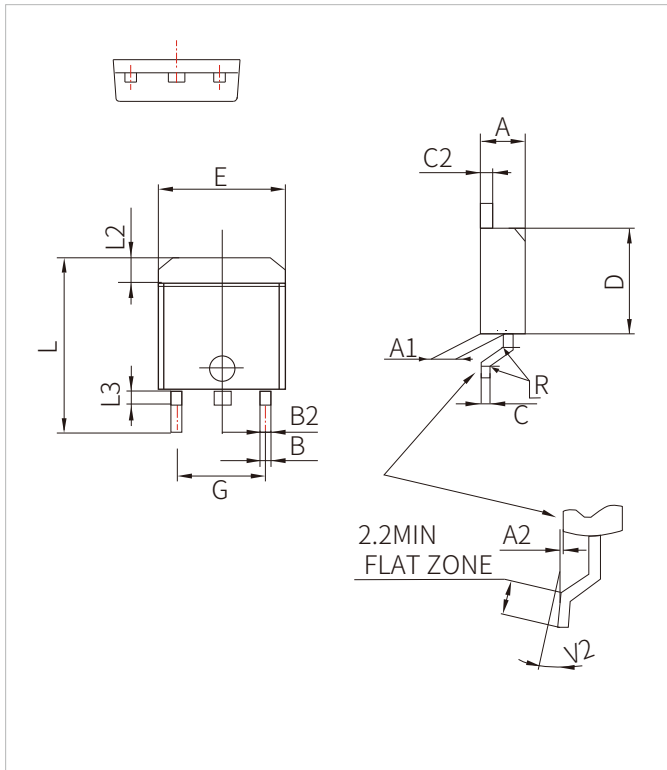
Fig. 3-Typical Forward Voltage Characteristics Per Leg

Fig. 4-Typical Reverse Characteristics Per Leg


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150°C
	Temperature Max ($T_{s(\max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(\max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (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 (T_p)		8 minutes max.
Do not exceed		260°C



TO-263 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.30		4.60	0.169		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.037
B2	1.25	1.40		0.048	0.055	
C	0.45		0.60	0.017		0.024
C2	1.21		1.36	0.047		0.054
D	8.95		9.35	0.352		0.368
E	9.80		10.28	0.386		0.405
G	4.88		5.28	0.192		0.208
L	14.80		15.85	0.583		0.624
L2	1.27		1.40	0.050		0.055
L3	1.40		1.75	0.055		0.069
R		0.40			0.016	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Package	QTY/Reel	Reel Size
MUR1660DC	TO-263	800PCS	13"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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Website



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