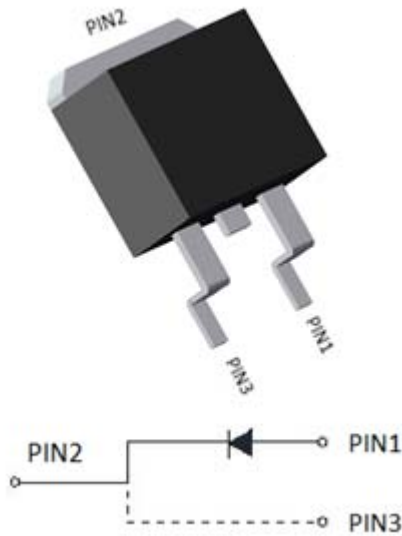


High Efficient Rectifier diodes



Features

- Based on silicon planar process, low Vf
- High surge forward current capability
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

Mechanical Data

- **Package:** TO-263
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked

■Maximum Ratings (Tj=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURB3080-F2-W5094HF
Device marking code			MURB3080
Repetitive Peak Reverse Voltage	V_{RRM}	V	800
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc(FIG.1)	I_o	A	30
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25°C	I_{FSM}	A	450
Current Squared Time @1ms≤t≤8.3ms Tj=25°C	I^2t	A ² s.	840
Storage Temperature	Tstg	°C	-55 ~ +175
Junction Temperature	Tj	°C	-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	204



MURB3080-F2-W5094HF

■Electrical Characteristics (T_j=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V _{FM}	V	I _{FM} =30.0A T _j =25°C	-	0.91	0.96
			I _{FM} =30.0A T _j =125°C		0.81	0.86
DC reverse current at rated DC blocking voltage per diode	I _{RRM1}	μA	V _{RM} =V _{RRM} T _j =25°C	-	-	5.0
	I _{RRM2}		V _{RM} =V _{RRM} T _j =125°C	-	-	200
Reverse Recovery Time	T _{rr}	ns	I _F =0.5A I _{RM} =1A I _{RR} =0.25A T _j =25°C	-	750	1000
			T _j =25°C	-	560	-
			T _j =125°C	-	830	-
Peak recovery current	I _{RRM}	A	T _j =25°C	-	30.8	-
			T _j =125°C	-	32.3	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	-	8.6	-
			T _j =125°C	-	12.9	-

■Thermal Characteristics (T_j=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURB3080-F2-W5094HF
Thermal Resistance	Between junction and case	R _{θJ-C}	°C/W	0.5
	Between junction and Air	R _{θJ-A}	°C/W	35

■Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURB3080	Approximate 1.43	50	2000	8000	Tube
MURB3080	Approximate 1.43	1000	2000	10000	Reel



■ Characteristics (Typical)

FIG1: I_o - T_c Curve

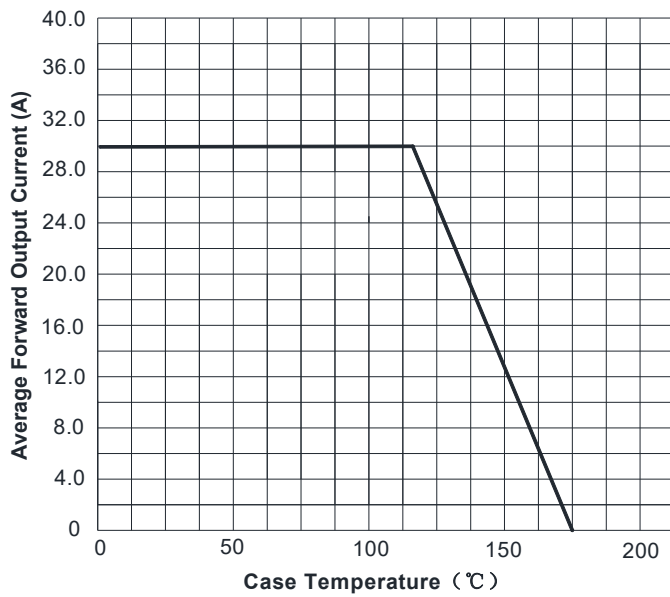


FIG2: Surge Forward Current Capability

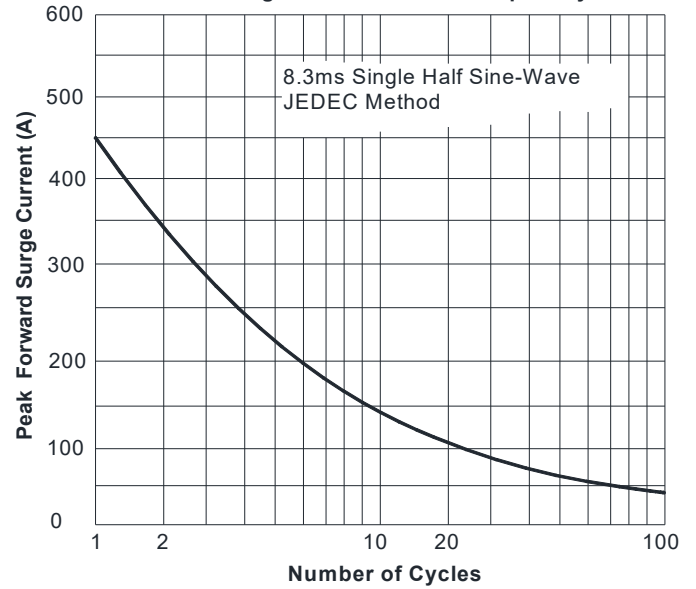


FIG3: Forward Voltage

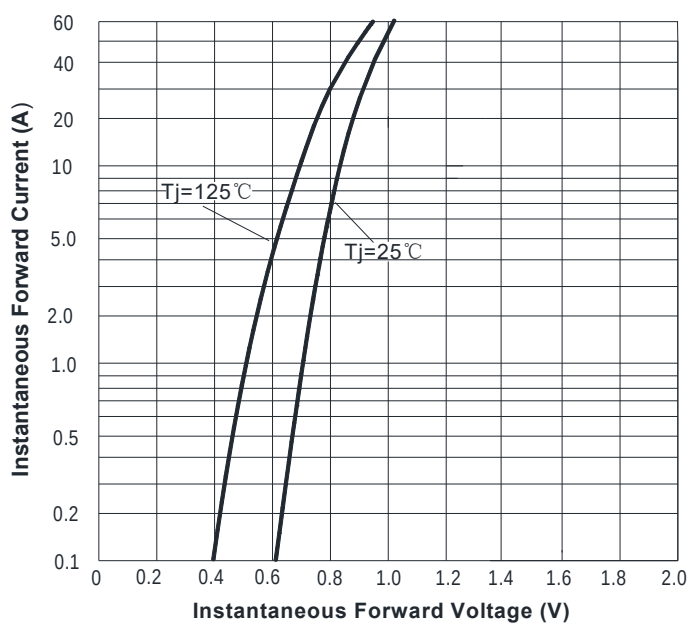


FIG4: Typical Reverse Characteristics

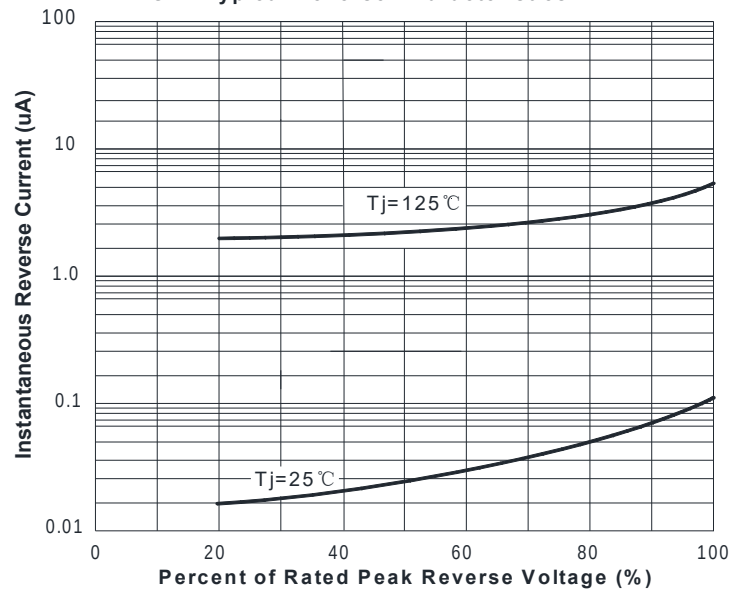
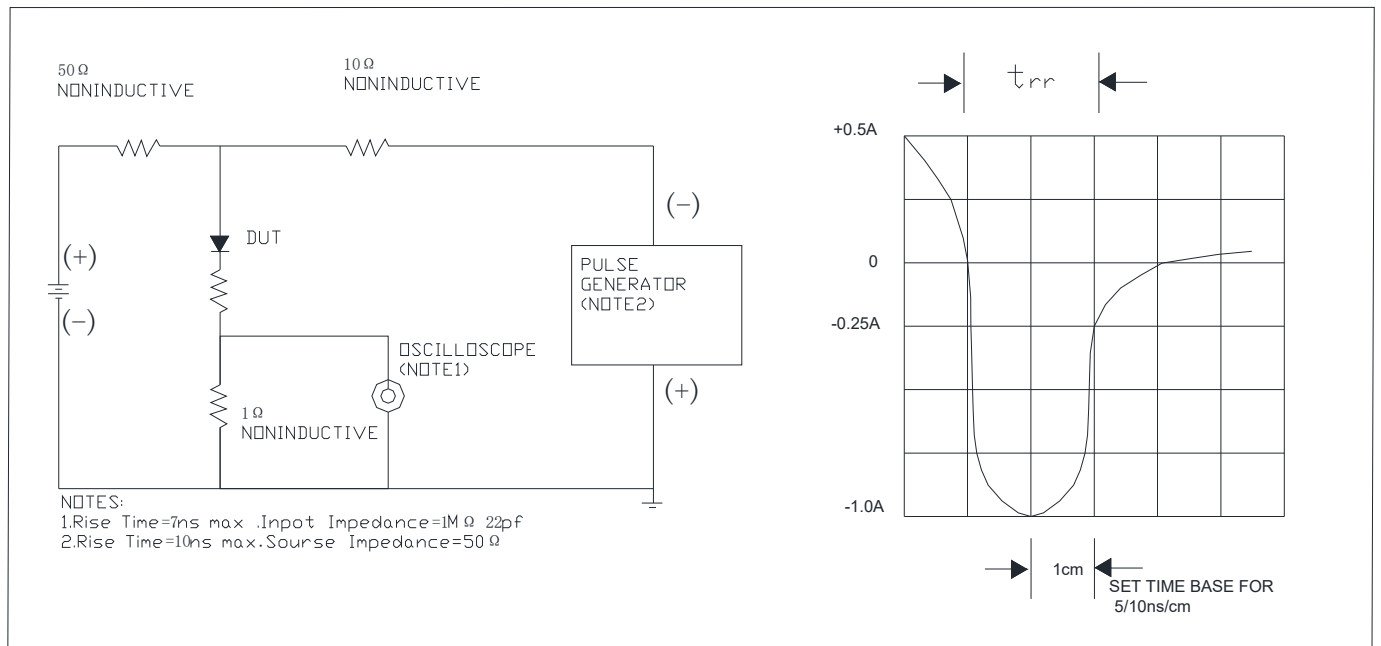
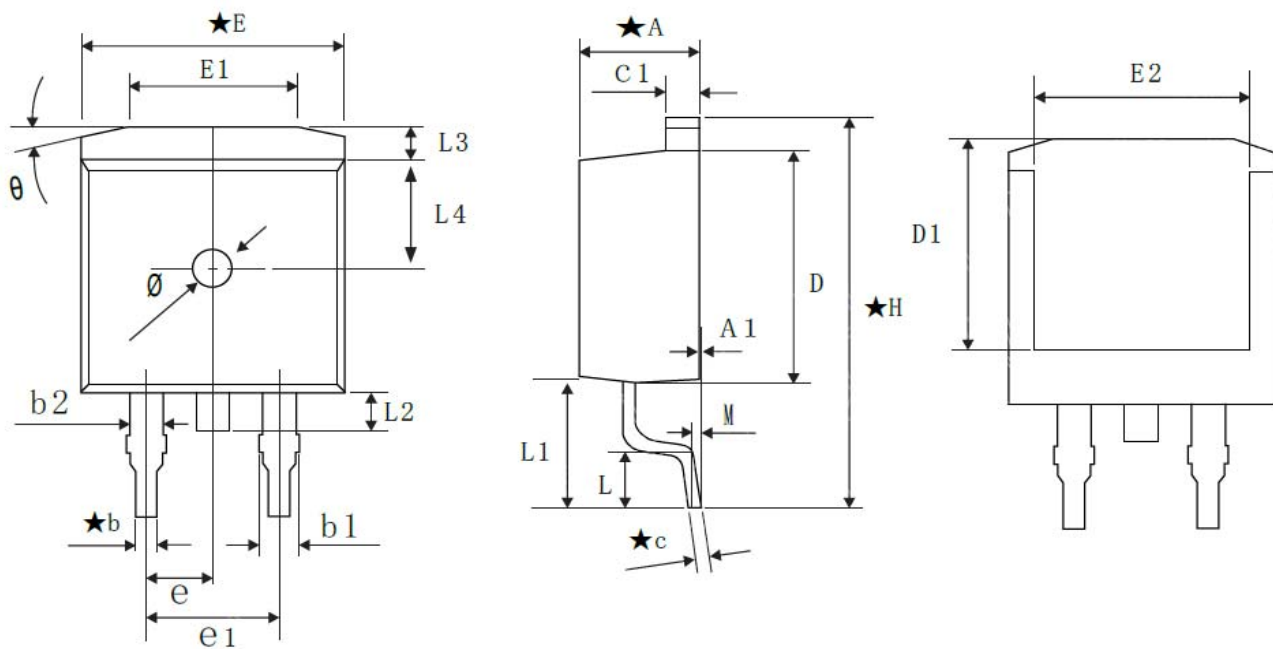


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



Outline Dimensions





SYMBOL	MIN	MAX
★A	4.30	4.70
A1	0.00	0.25
★b	0.70	0.90
b1	1.17	1.37
b2	1.17	1.37
★C	0.40	0.60
c1	1.25	1.35
D	9.00	9.20
D1	8.00	8.20
★H	14.9	15.5
★E	9.80	10.2
E1	6.30	6.50
E2	7.90	8.10
e1	4.93	5.23
L	1.85	2.45
L1	4.45	4.85
L2	1.30	1.70
L3	1.15	1.35
L4	4.50	4.60
Ø	1.5 REF	
e	2.54 BSC	
θ	13° TYP	
M	0.25	



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