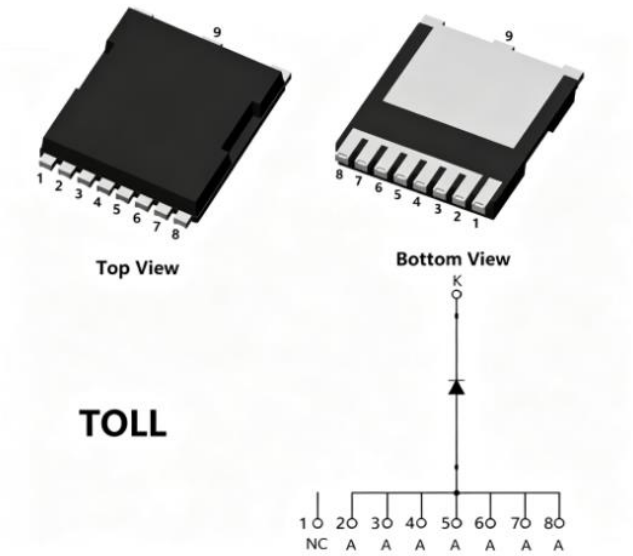
High Efficient Rectifier diodes



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**: TOLL
  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℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MUR4580E
Device marking code			MUR4580E
Repetitive Peak Reverse Voltage	V_{RRM}	V	800
Average Rectified Output Current @60Hz half sine-wave, R-load, Tc(FIG.1)	Io	A	45
Surge(Non-repetitive)Forward Current @60Hz half sine-wave, 1 cycle, Tj=25℃	I_{FSM}	A	600
Current Squared Time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s.	1494
Storage Temperature	Tstg	℃	-55 ~ +175
Junction Temperature	Tj	℃	-55 ~ +175
Typical Junction capacitance @4V,1MHz	Cj	pF	339

■Electrical Characteristics（Tj=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
instantaneous forward voltage drop per diode	V_{FM}	V	I_{FM}=45.0A T_j=25℃		-	0.91	0.96
			I_{FM}=45.0A T_j=125℃			0.81	0.86
DC reverse current at rated DC blocking voltage per diode	I_{RRM1}	uA	V_{RM}=V_{RRM} T_j=25℃		-	-	5.0
	I_{RRM2}		V_{RM}=V_{RRM} T_j=125℃		-	-	200
Reverse Recovery Time	Trr	ns	I_F=0.5A I_{RM}=1A I_{RR}=0.25A Tj=25℃		-	850	1000
			Tj=25℃	I_F=45A di/dt=-200A/us V_{RM}=400V	-	465	-
			Tj=125℃		-	547	-
Peak recovery current	I_{RRM}	A	Tj=25℃		-	43.4	-
			Tj=125℃		-	49.1	-
Reverse recovery charge	Qrr	uC	Tj=25℃		-	13.4	-
			Tj=125℃		-	17.9	-

■Thermal Characteristics （Tj=25℃ Unless otherwise specified）

PARAMETER		SYMBOL	UNIT	MUR4580E
Thermal Resistance	Between junction and case	$R_{\theta J-C}$	℃/W	0.5
	Between junction and Air	$R_{\theta J-A}$	℃/W	35

■Ordering Information (Example)

PREFERED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MUR4580E	Approximate 0.8	2000	4000	20000	Reel

■Characteristics (Typical)

FIG1:Io -Tc Curve

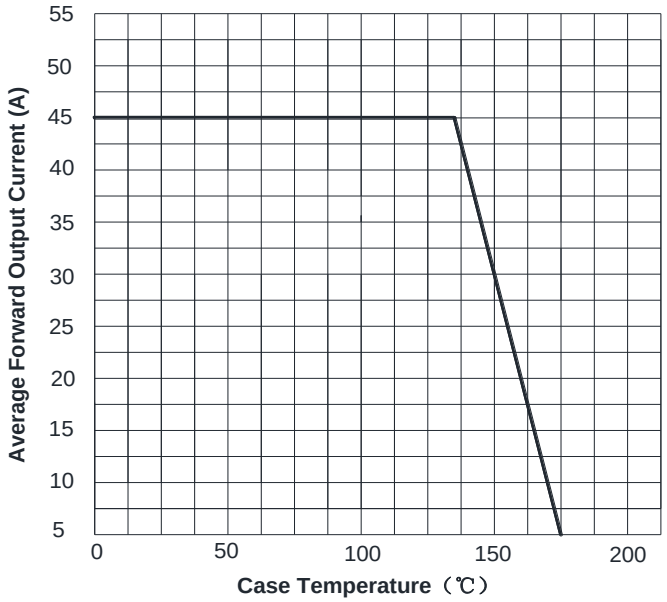


FIG2:Surge Forward Current Capability

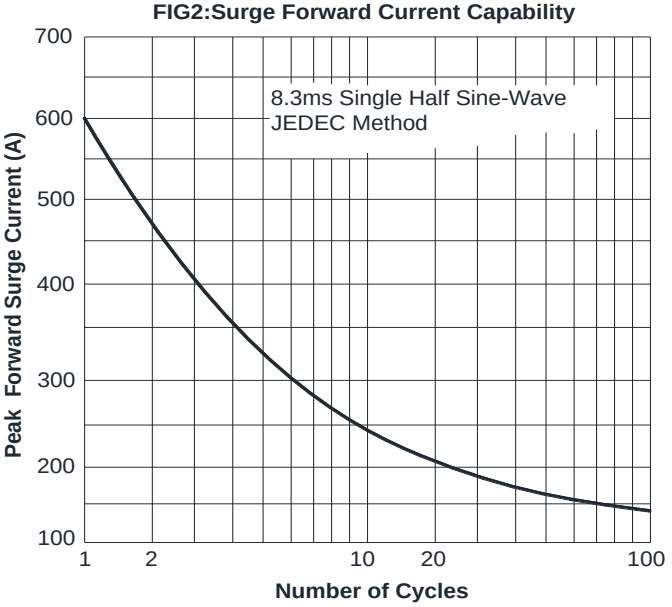


FIG3: Forward Voltage

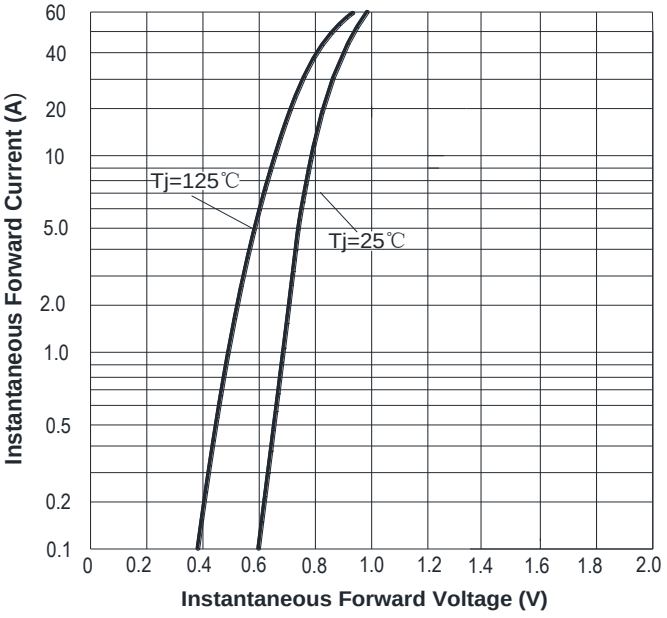


FIG4: Typical Reverse Characteristics

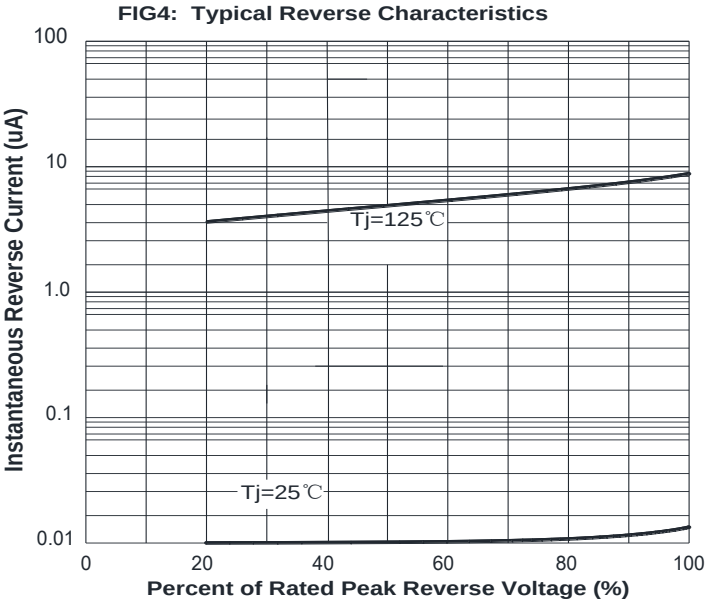
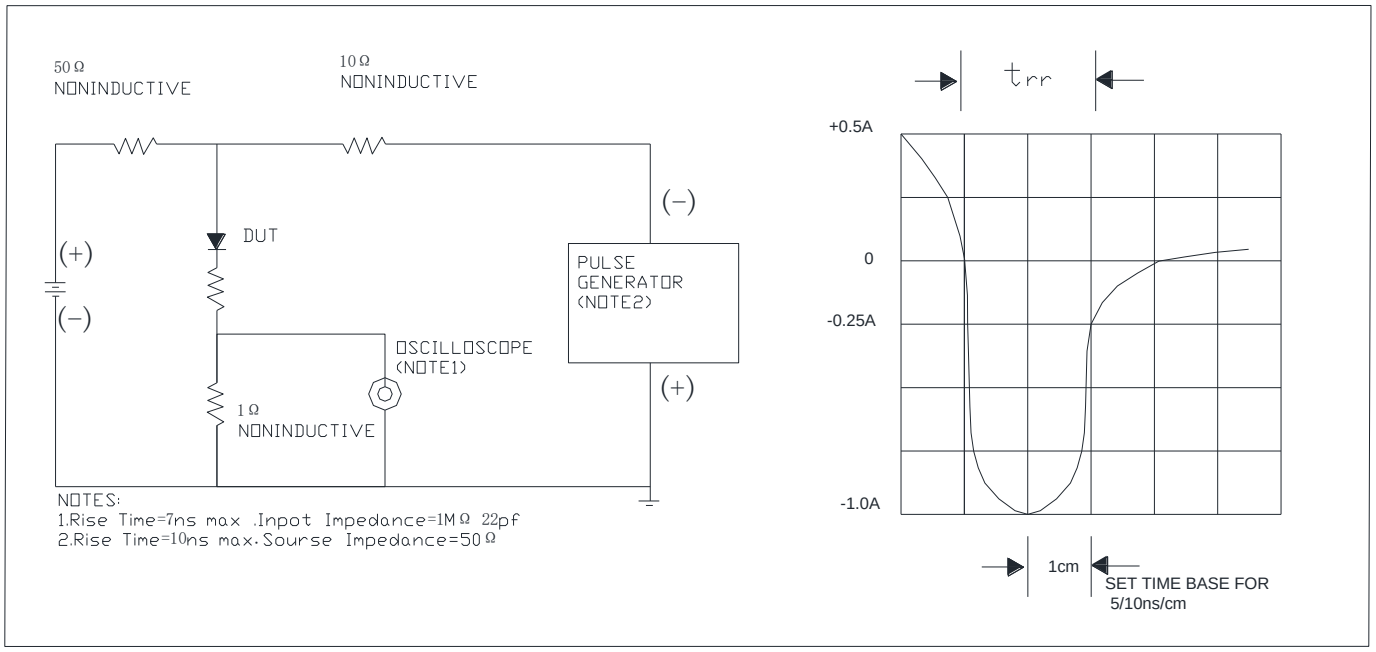
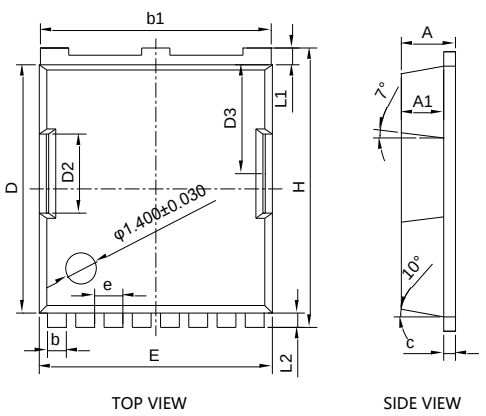
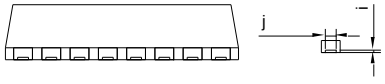


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



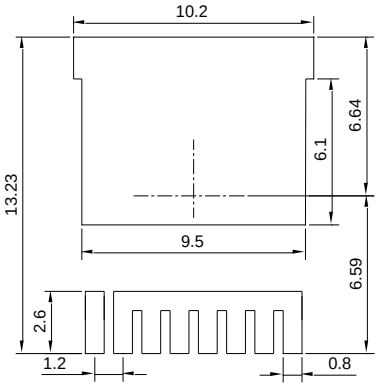
■Outline Dimensions





SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	2.2	2.3	2.4
A1	1.7	1.8	1.9
b	0.7	0.8	0.9
b1	9.7	9.8	9.9
b2	1.1	1.2	1.3
c	0.4	0.5	0.6
D	10.28	10.38	10.48
D1	10.98	11.08	11.18
D2	3.2	3.3	3.4
D3	4.45	4.55	4.65
E	9.8	9.9	10
E1	8	8.1	8.2
e		1.2 BSC	
H	11.58	11.68	11.78
H1		6.95 BSC	
i		0.1 REF	
j		0.46 REF	
L	1.5	1.6	1.7
L1	0.6	0.7	0.8
L2	0.5	0.6	0.7
L3	0.3	0.4	0.5
Q		8 REF	
R	3.0	3.1	3.2

Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.03mm.
3.The pad layout is for reference purposes only.



SUGGESTED SOLDER PAD LAYOUT
TOP VIEW

UNIT：mm

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