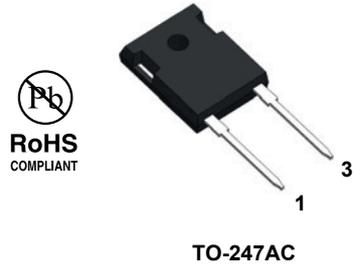


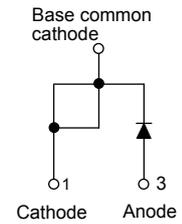
Features

- Plastic package has Underwriters Laboratory flammability Classification 94V-0
- Ultrafast recovery characteristics
- Low forward voltage drop
- Low reverse leakage current
- Soft recovery characteristics
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25" (6.35mm) from case
- Component in accordance to RoHS 2015/863/EU



Mechanical Data

- Case: TO-247AC molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any



Schematic Diagram

Typical Applications

- Anti-parallel diode
 - Switching power supply
 - Inverters
- Free wheeling diode
 - Motor controller
 - Converters
 - Inverters
- PFC
- Snubber, clamp diode

Maximum Ratings (Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	100	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method at Rated T_L)	I_{FSM}	860	A
Typical Thermal Resistance, from Junction to Case	$R_{\theta JC}$	0.70	°C/W
Operating Junction Temperature Range	T_J	-55 to +175	°C
Storage Temperature Range	T_{stg}	-55 to +175	°C

Electrical Characteristics ($T_J=25^\circ\text{C}$ Unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Breakdown Voltage	V_{BR}	$I_R=100\mu\text{A}$	600	-	-	V	
Blocking Voltage	V_R						
Instantaneous Forward Voltage ¹	V_F	$T_J=25^\circ\text{C}$	-	1.35	1.80	V	
		$T_J=125^\circ\text{C}$					$I_F=100\text{A}$
Reverse Current ²	I_R	$T_J=25^\circ\text{C}$	-	-	5	μA	
		$T_J=125^\circ\text{C}$				100	μA
		$T_J=150^\circ\text{C}$					300
Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	-	-	95	ns	
		$I_F=1\text{A}, V_R=30\text{V}, dI/dt=200\text{A}/\mu\text{S}$	-	42	55		

Notes:

1. Pulse test: 300 μs pulse width, 1% duty cycle
2. Pulse test: pulse width $\leq 40\text{ms}$

Ratings and Characteristics Curves

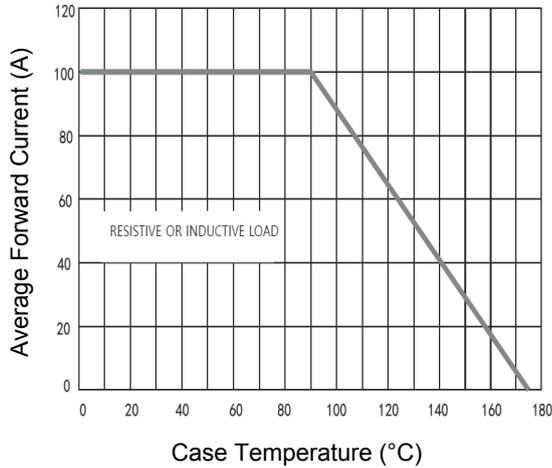


Figure 1. Forward Current Derating Curve

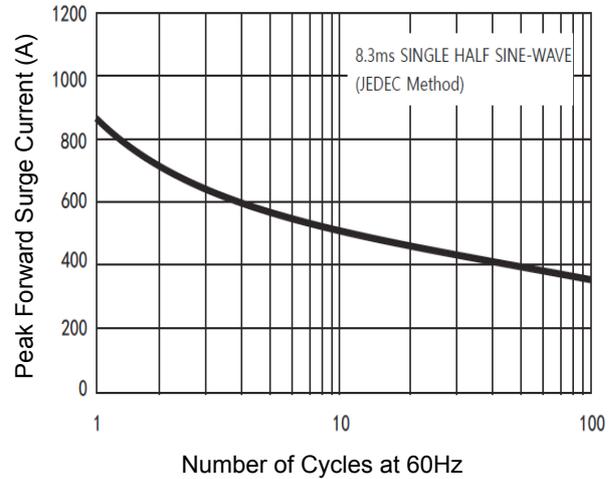


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

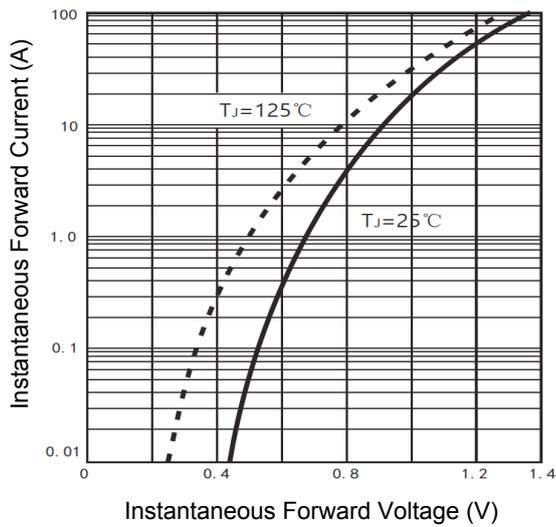


Figure 3. Typical Instantaneous Forward Characteristics

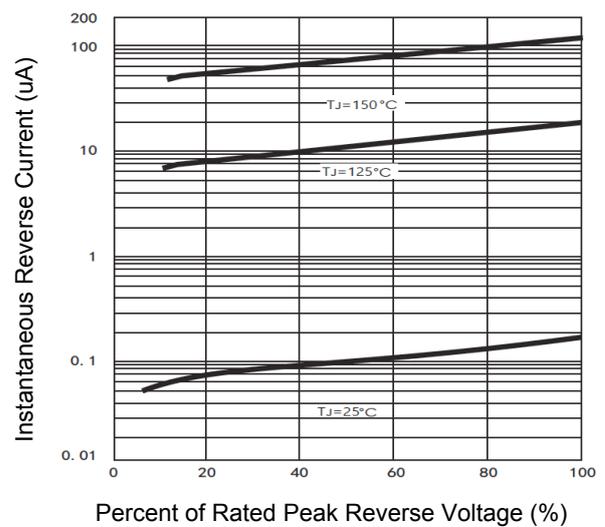
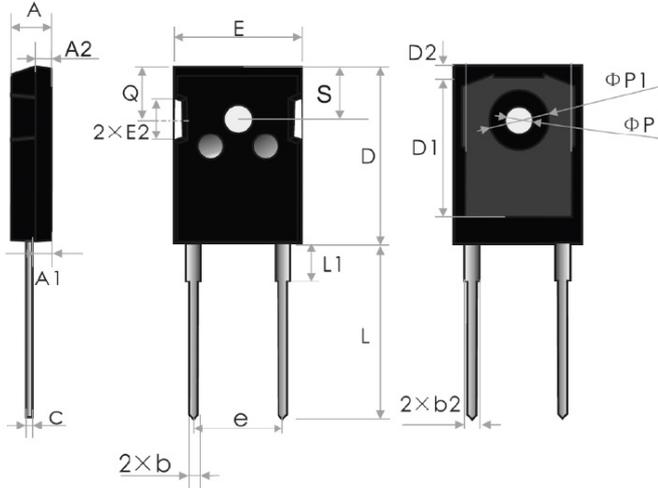


Figure 4. Typical Reverse Characteristics

Package Outline Dimensions (TO-247AC)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	4.70	5.30	0.185	0.209
A1	2.21	2.59	0.087	0.102
A2	1.50	2.49	0.059	0.098
D	20.30	21.30	0.799	0.839
E	15.48	16.24	0.609	0.639
E2	4.30	5.30	0.169	0.209
e	10.52	11.52	0.414	0.454
L	19.80	20.30	0.780	0.799
L1	4.00	4.60	0.157	0.181
ΦP	3.50 TYP		0.138 TYP	
Q	5.38	6.19	0.212	0.244
S	5.89	6.40	0.232	0.252
b	0.99	1.40	0.039	0.055
b2	1.65	2.39	0.065	0.094
c	0.38	0.89	0.015	0.035
D1	13.07	14.07	0.515	0.554
D2	0.51	1.35	0.020	0.053
ΦP1	7.20 TYP		0.283 TYP	

Order Information

Device	Package	Marking	Carrier	Quantity
GSMUR10060P	TO-247AC	MUR10060P	Tube	30pcs / Tube