

Features

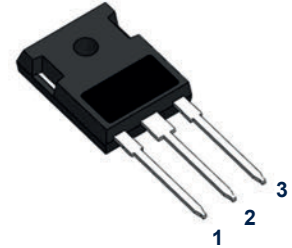
- Fred chip planar construction
- Super fast switching, high efficiency
- Low power loss, high efficiency
- Low reverse leakage current
- High surge current capability
- Plastic material has UL flammability classification 94V-0

Mechanical Data

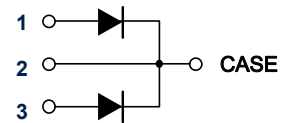
- Case: TO-247AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any

Applications

- For use in boost stage in SMPS
- High frequency inverters for solar inverters
- DC/DC converters
- High frequency output rectification of battery chargers
- Free wheeling diodes in motor drivers



TO-247AB



Schematic Diagram

Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.)

Parameters		Symbol	GSMUR30120PT		Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	1200		V
Maximum RMS Voltage		V_{RMS}	840		V
Maximum DC Blocking Voltage		V_{DC}	1200		V
Maximum Average Forward (See Figure 1)	Per leg	$I_{F(AV)}$	15		A
	Total device		30		
Peak Forward Surge Current: 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC method), Per leg		I_{FSM}	150		A
Maximum Forward Voltage at 15A per leg		V_F	Typ.	Max.	V
			2.0	2.4	
Maximum Reverse Recovery Time (Measured With $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$)		T_{rr}	Typ.	Max.	nS
			45	60	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J=25^\circ C$	I_R	5		uA
	$T_J=125^\circ C$		100		
Typical Thermal Resistance, Junction to Case		$R_{\theta JC}$	1.0		$^\circ C/W$
Typical Thermal Resistance, Junction to Ambient		$R_{\theta JA}$	45		$^\circ C/W$
Operating Junction and Storage Temperature Range		T_J, T_{STG}	-55 to +150		$^\circ C$

Ratings and Characteristic Curves

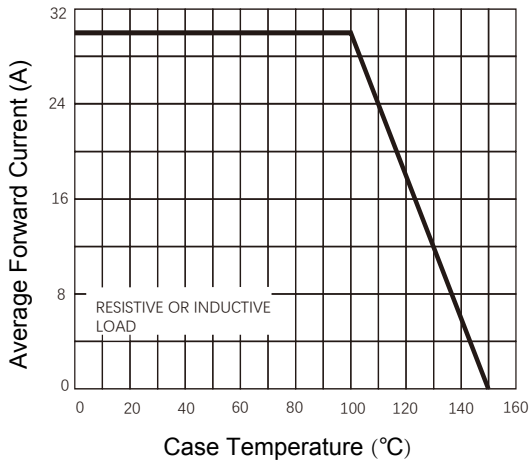


Figure 1. Forward Current Derating Curve

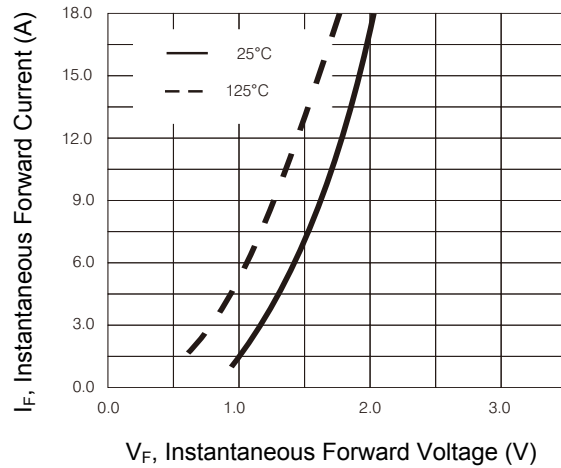


Figure 2. Typical Instantaneous Forward Characteristics

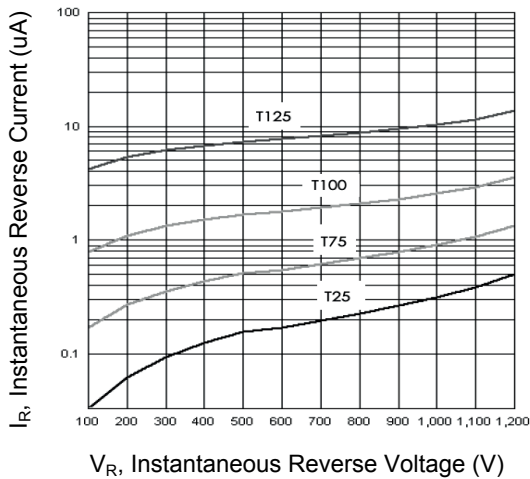


Figure 3. Typical Reverse Characteristics

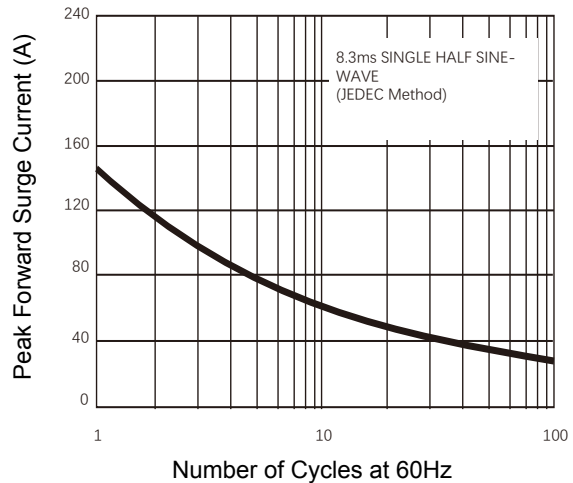
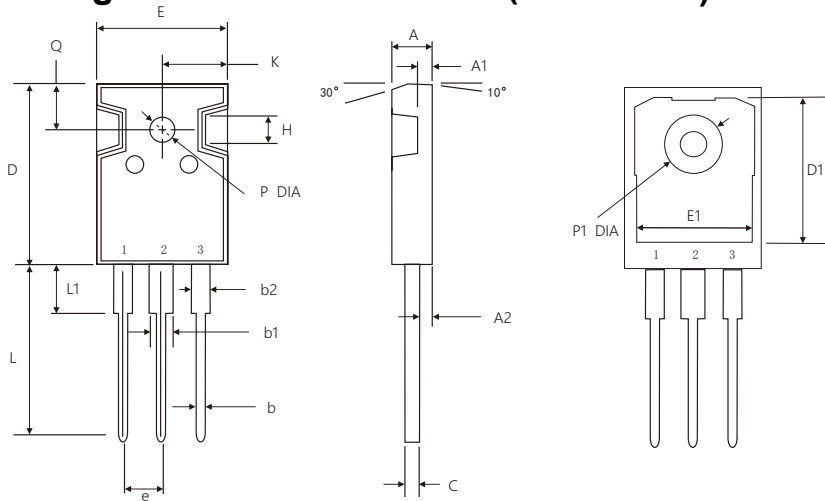


Figure 4. Max. Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions (TO-247AB)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.70	5.30	0.185	0.209
A1	1.80	2.20	0.071	0.087
A2	2.24	2.58	0.088	0.102
b	1.00	1.40	0.039	0.055
b1	2.60	3.60	0.102	0.142
b2	1.60	2.60	0.063	0.102
C	0.40	0.80	0.016	0.031
D	20.00	22.00	0.787	0.866
D1	16.25	16.85	0.640	0.663
E	15.4	16.4	0.606	0.646
E1	13.10	13.50	0.516	0.531
L	19.60	20.40	0.772	0.803
e	5.20	5.70	0.205	0.224
L1	3.80	4.50	0.150	0.177
P	3.30	3.70	0.130	0.146
P1	-	7.30	-	0.287
Q	5.40	6.40	0.213	0.252
K	7.40	8.20	0.291	0.323
H	4.60 TYP		0.181 TYP	

Order Information

Device	Package	Marking	Carrier	Quantity
GSMUR30120PT	TO-247AB	MUR30120PT	Tube	30pcs / Tube