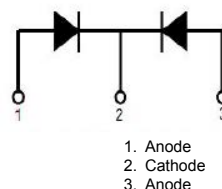
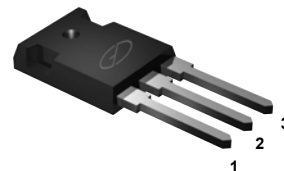


Features

- Low power loss
- High efficiency, low forward voltage
- High current capability, high surge capacity
- Super fast recovery times
- High voltage



Schematic Diagram



TO-247

Applications

- Switching power supply
- Power switching circuits
- General purpose

Absolute Maximum Ratings ($T_C=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	400	V
Working Peak Reverse Voltage	V_{RWM}	400	V
DC Blocking Voltage	V_R	400	V
Average Rectified Forward Current (Single), $T_C=100^{\circ}\text{C}$	$I_{F(AV)}$	15	A
Average Rectified Forward Current (Double), $T_C=100^{\circ}\text{C}$		30	A
Repetitive Peak Surge Current (Single)	I_{FRM}	20	A
Non-Repetitive Peak Surge Current (Single), $T_P=8.3\text{ms}$	I_{FSM}	180	A
Avalanche Energy (Single), $L=1\text{mH}$	E_{AS}	20	mJ
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.75	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_C=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Maximum Instantaneous Forward Voltage	V_F	$I_F=15\text{A}$	-	1.25	1.40	V
		$I_F=15\text{A}, T_C=150^{\circ}\text{C}$	-	-	1.30	V
		$I_F=20\text{A}$	-	1.38	1.5	V
Maximum Instantaneous Reverse Current	I_R	$V_R=400\text{V}$	-	-	5	μA
		$V_R=400\text{V}, T_C=150^{\circ}\text{C}$	-	-	1	mA
Maximum Reverse Recovery Time	t_{rr}	$V_R=30\text{V}, I_F=1\text{A}, -di/dt=50\text{A}/\mu\text{s}$	-	26	35	ns
Total Capacitance	C_{tot}	$V_R=0\text{V}, f=1\text{MHz}$	-	205	-	pF
DC Blocking Voltage	V_{BR}	$I_R=100\mu\text{A}$	410	440	-	V

Typical Electrical and Thermal Characteristic Curves

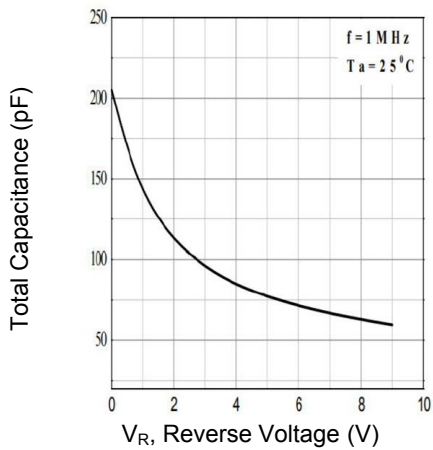


Figure 1. Total Capacitance vs. Voltage

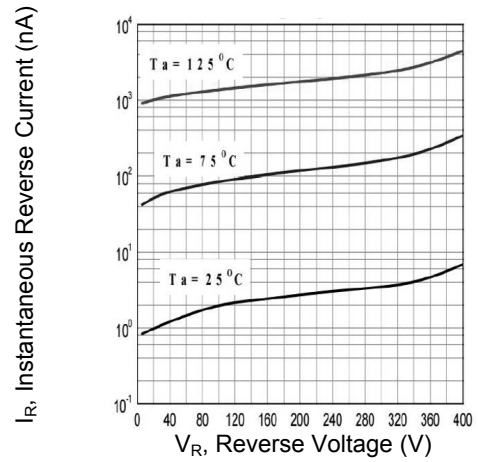


Figure 2. Reverse Current vs. Reverse Voltage

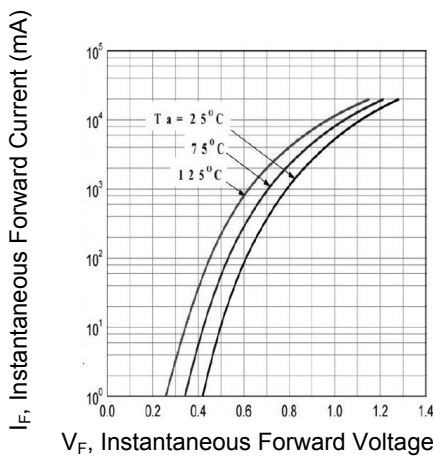


Figure 3. Forward Current vs. Forward Voltage

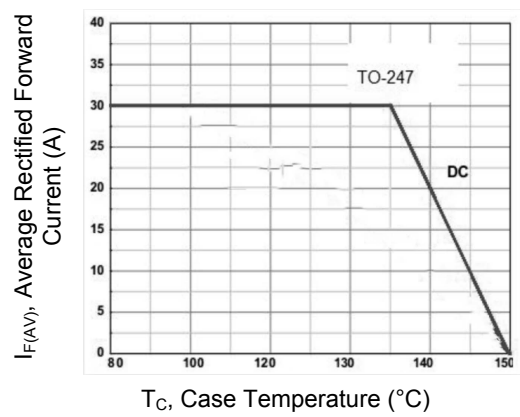
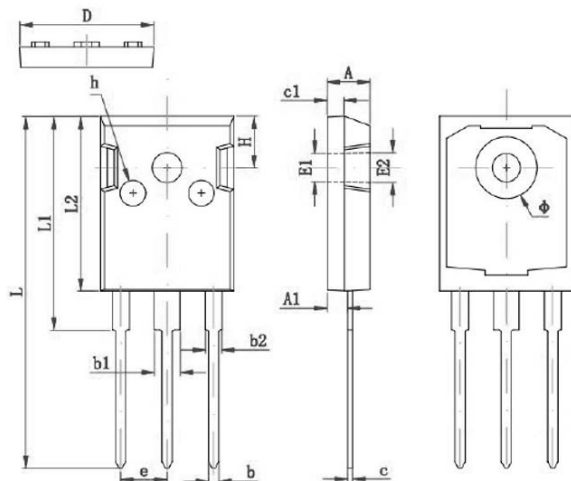


Figure 4. Current Derating Curve

Package Outline Dimensions (TO-247)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	4.850	5.150	0.191	0.200
A1	2.200	2.600	0.087	0.102
b	1.000	1.400	0.039	0.055
b1	2.800	3.200	0.110	0.126
b2	1.800	2.200	0.071	0.087
c	0.500	0.700	0.020	0.028
c1	1.900	2.100	0.075	0.083
D	15.450	15.750	0.608	0.620
E1	3.500 REF		0.138 REF	
E2	3.600 REF		0.142 REF	
L	40.900	41.300	1.610	1.626
L1	24.800	25.100	0.976	0.988
L2	20.300	20.600	0.799	0.811
Φ	7.100	7.300	0.280	0.287
e	5.450 TYP		0.215 TYP	
H	5.980 REF		0.235 REF	
h	0.000	0.300	0.000	0.012

Order Information

Device	Package	Marking	Carrier	Quantity
GSMUR3040BCS	TO-247	MUR3040	Tube	30 Units / Tube