

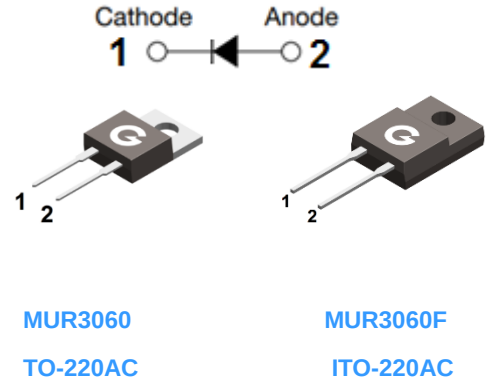
Features

- Low cost
- Low leakage
- High current capability
- RoHS compliant with Halogen-free

HF

Mechanical Data

- Case: TO-220AC, ITO-220AC
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MUR3060	TO-220AC	50 pcs / Tube	MUR3060
MUR3060F	ITO-220AC	50 pcs / Tube	MUR3060F

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	600	V
Working Peak Reverse Voltage	V _{RWM}	600	V
DC Reverse Voltage	V _R	600	V
RMS Reverse Voltage	V _{RMS}	420	V
Maximum Average Forward Output Current	I _{F(AV)}	30	A
Peak Forward Surge Current (8.3ms single half sine-wave)	I _{FSM}	300	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-to-Case (TO-220AC)	R _{θJC}	2	°C/W
Thermal Resistance Junction-to-Case (ITO-220AC)		4	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +175	°C
Storage Temperature Range	T _{STG}	-55 ~ +175	°C

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V_{BR}	Reverse Breakdown Voltage	$I_R = 100\mu\text{A}$	600	-	-	V
V_F	Forward Voltage	$I_F = 30\text{A}, T_J = 25^\circ\text{C}$	-	1.35	1.5	V
		$I_F = 30\text{A}, T_J = 150^\circ\text{C}$	-	1.1		V
I_R	Maximum Peak Reverse Current	$V_R = V_{RRM}, T_J = 25^\circ\text{C}$	-	-	10	μA
		$V_R = V_{RRM}, T_J = 150^\circ\text{C}$	-	-	500	μA
C_J	Junction Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	-	400	-	pF
t_{rr}	Reverse Recovery Time	$I_F = 0.5\text{A}, I_{rr} = 0.25\text{A}, I_R = 1\text{A}$	-	37	50	ns
		$I_F = 1\text{A}, V_R = 30\text{V}$	-	36	-	ns
Q_{rr}	Reverse Recovery Charge	$dI_F/dt = 100\text{A}/\mu\text{s}$	-	43	-	nC
I_{rr}	Peak Recovery Current	$T_J = 25^\circ\text{C}$	-	2.2	-	A
t_{rr}	Reverse Recovery Time	$I_F = 30\text{A}, V_R = 400\text{V}$ $dI_F/dt = 200\text{A}/\mu\text{s}$ $T_J = 25^\circ\text{C}$	-	82	-	ns
Q_{rr}	Reverse Recovery Charge		-	235	-	nC
I_{rr}	Peak Recovery Current		-	5.5	-	A
t_{rr}	Reverse Recovery Time	$I_F = 1\text{A}, V_R = 30\text{V}$ $dI_F/dt = 100\text{A}/\mu\text{s}$ $T_J = 125^\circ\text{C}$	-	94	-	ns
Q_{rr}	Reverse Recovery Charge		-	232	-	nC
I_{rr}	Peak Recovery Current		-	4.8	-	A
t_{rr}	Reverse Recovery Time	$I_F = 30\text{A}, V_R = 400\text{V}$ $dI_F/dt = 200\text{A}/\mu\text{s}$ $T_J = 125^\circ\text{C}$	-	143	-	ns
Q_{rr}	Reverse Recovery Charge		-	931	-	nC
I_{rr}	Peak Recovery Current		-	12.5	-	A

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

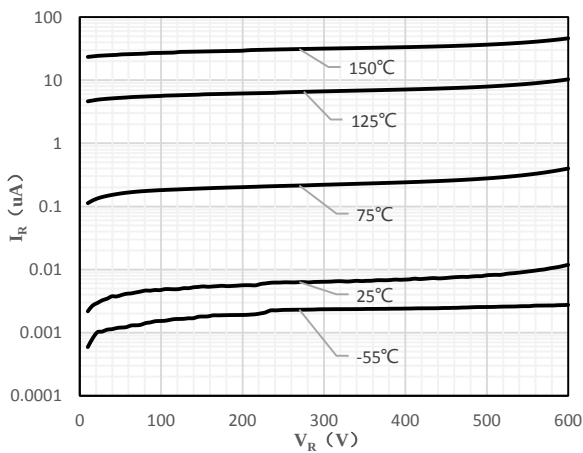


Fig 1 Typical Forward Characteristic

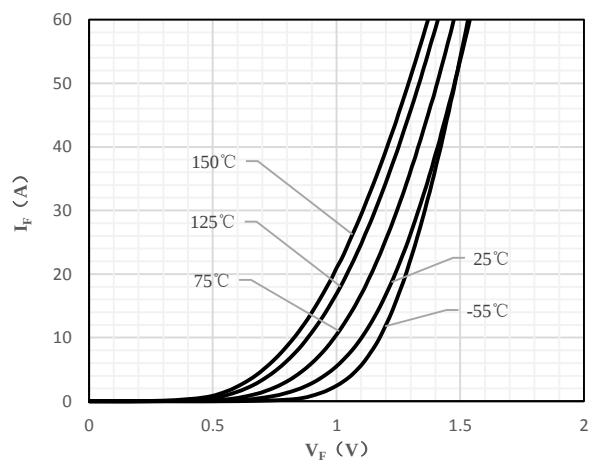


Fig 2 Typical Reverse Characteristic

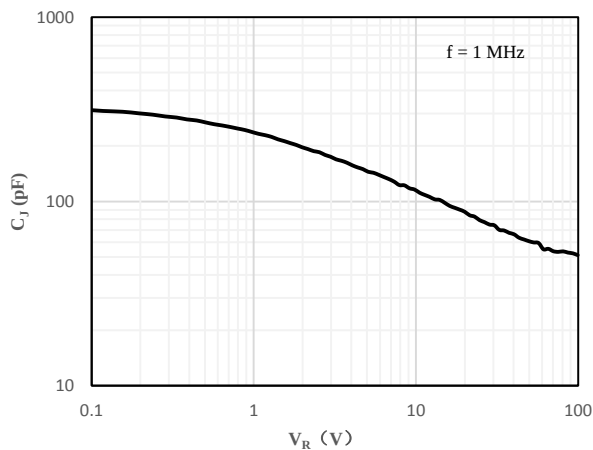


Fig 3 Typical Capacitance Characteristic

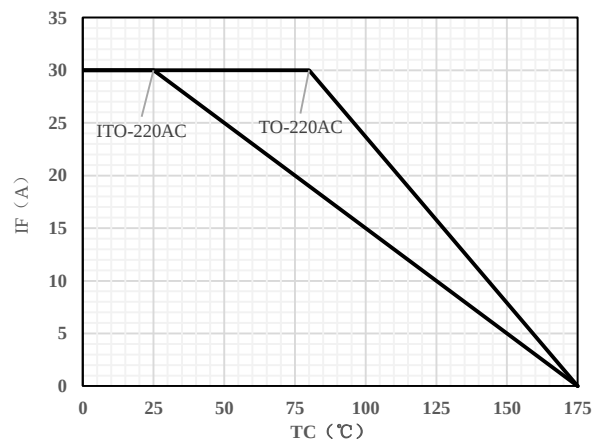
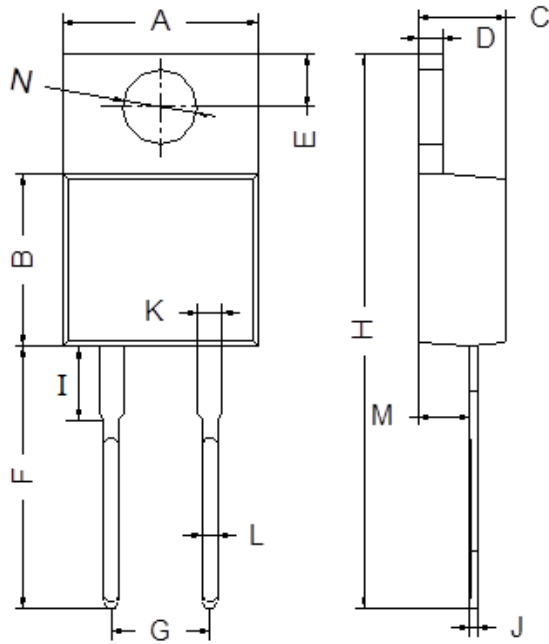
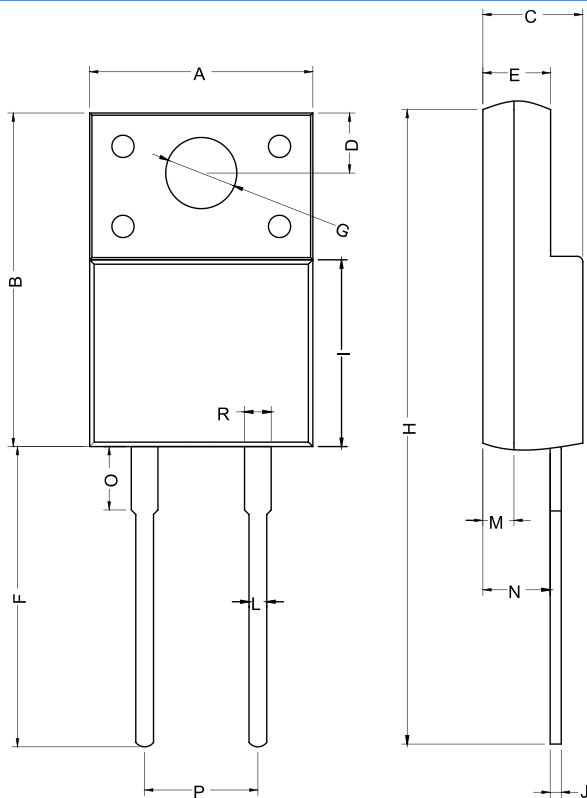


Fig 4 Current Derating Curve

Package Outline Dimensions (Unit: mm)



TO-220AC		
Dimension	Min.	Max.
A	9.80	10.30
B	8.70	9.10
C	4.37	4.77
D	1.07	1.47
E	2.64	2.84
F	13.14	13.74
G	4.98	5.18
H	28.03	28.83
I	3.50	4.00
J	0.28	0.48
K	1.22	1.32
L	0.71	0.91
M	2.40	2.60
N	3.76	3.96



ITO-220AC		
Dimension	Min.	Max.
A	9.90	10.30
B	14.80	15.20
C	4.30	4.70
D	2.50	2.90
E	2.80	3.30
F	13.00	13.60
G	3.10	3.30
H	28.00	28.60
I	7.90	8.90
J	0.40	0.60
L	0.50	0.90
M	1.30	1.50
N	2.60	2.80
O	2.40	3.30
P	5.00	5.20
R	1.10	1.30