

BRMUR30650ACQ

Rev.A Mar.-2024

/ Descriptions

TO-220AC

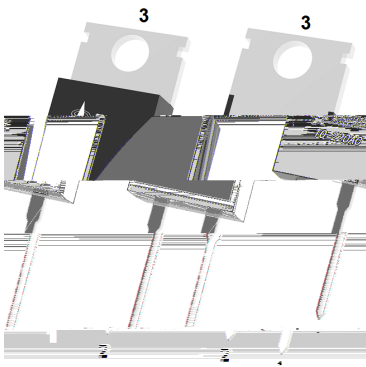
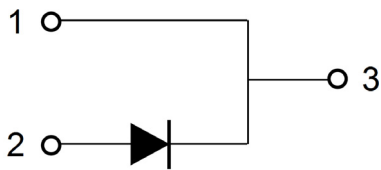
Fast Recovery Epi Diodes in a TO-220AC Plastic Package.

/ Features

AEC-Q101

High frequency operation, High surge forward current capability, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

For high frequency, high voltage, high current rectifier diode, freewheeling diode, Meet the stringent requirements of automotive applications.



PIN 1,3 Cathode PIN2 Anode

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	650	V
Continuous Forward Current	I_F	30	A
Reverse recovery peak current	$I_{RM}, I_F=30A$ $V_R=200V$ $di/dt=200A/us$	3.1	
Non-repetitive forward surge current	$I_{FSM}, tp=8.3ms$	200	
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	75	/ W
Thermal Resistance Junction to Case	$R_{\theta Jc}$	3	/ W
Junction Temperature Range	T_j	-55 150	
Storage Temperature Range	T_{stg}		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_R	$I_R=100uA$	660	700	-	V
Forward Voltage		$I_F=30A$ $T_C=25$	1.5	1.75	2.0	
Instantaneous Reverse Current	I_R	$V_R=650V$ $T_a=25$	-	50	1000	nA
Reverse Recovery Time	t_{rr}	$I_F=0.5A$ $I_R=1.0A$ $I_{RR}=0.25A$	30	40	50	ns

/ Electrical Characteristic Curve

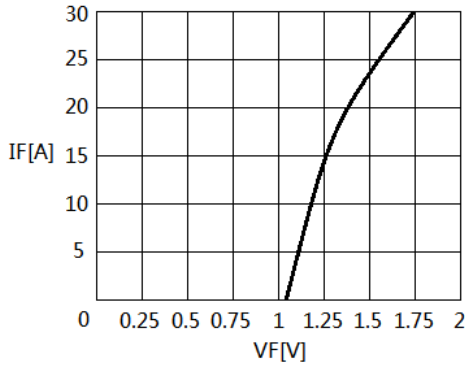


Figure 1 Forward Characteristics

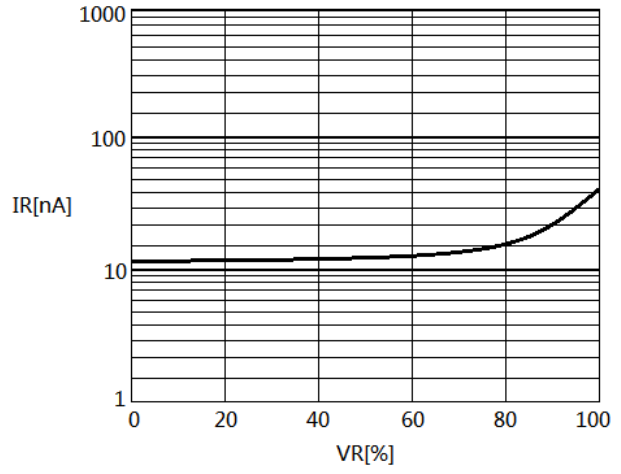


Figure 2 Reverse Characteristics

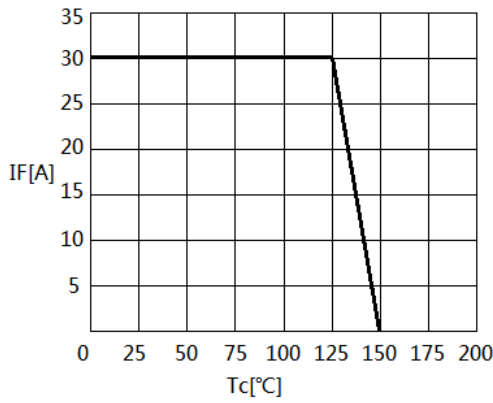
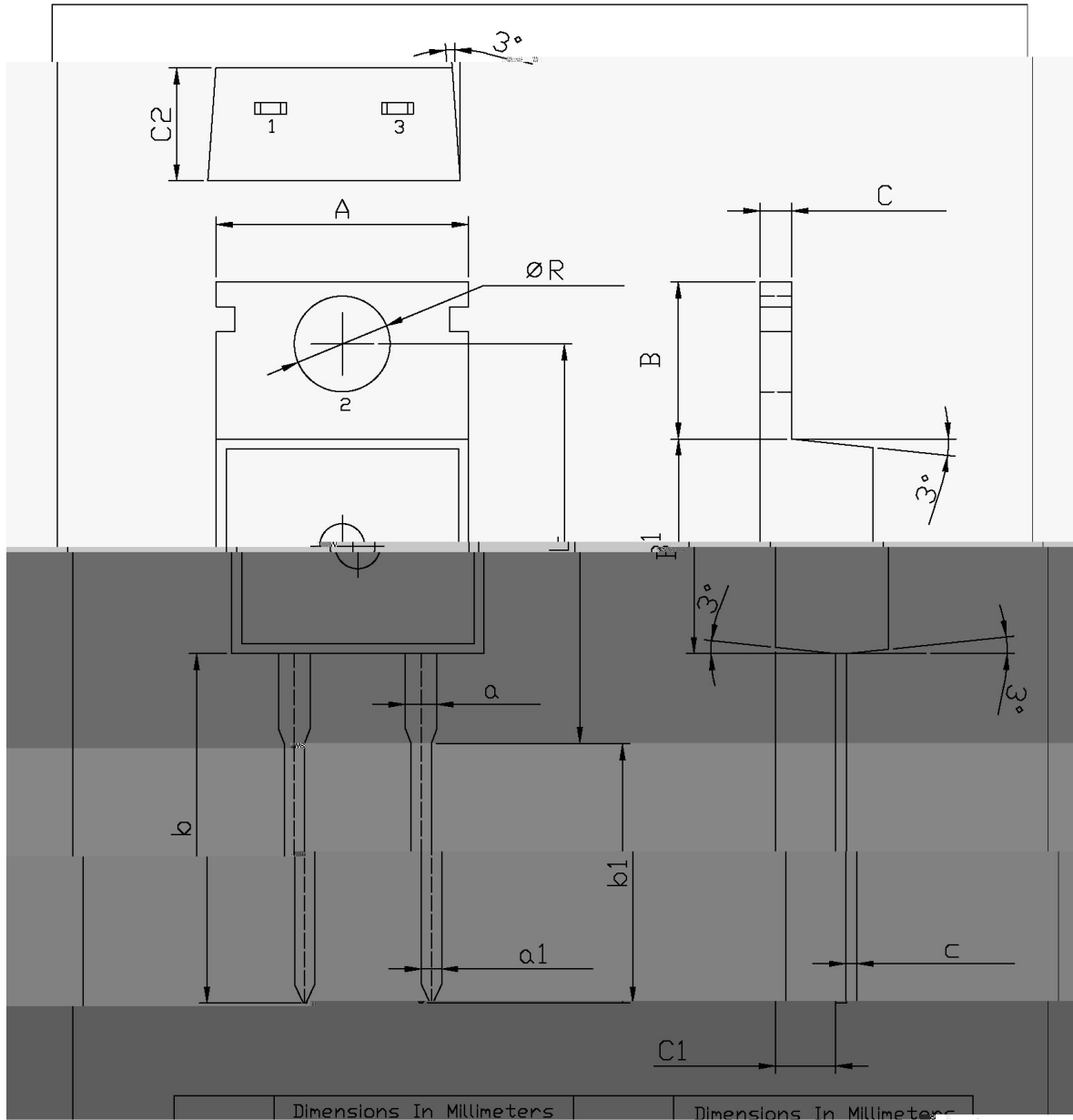


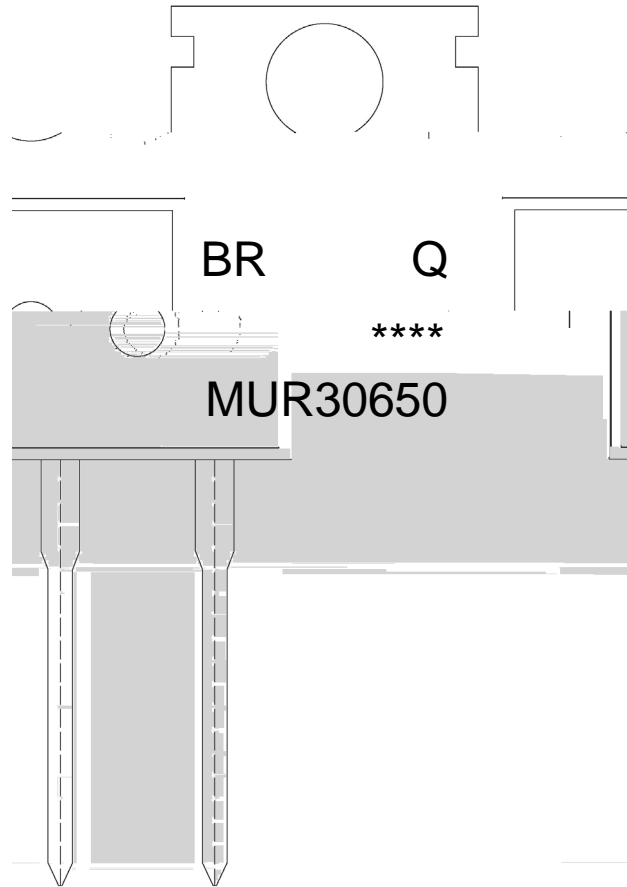
Figure 3 Peak Forward Current Derating

/ Package Dimensions

TO-220AC Unit:mm



/ Marking Instructions



BR

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MUR30650

Note:

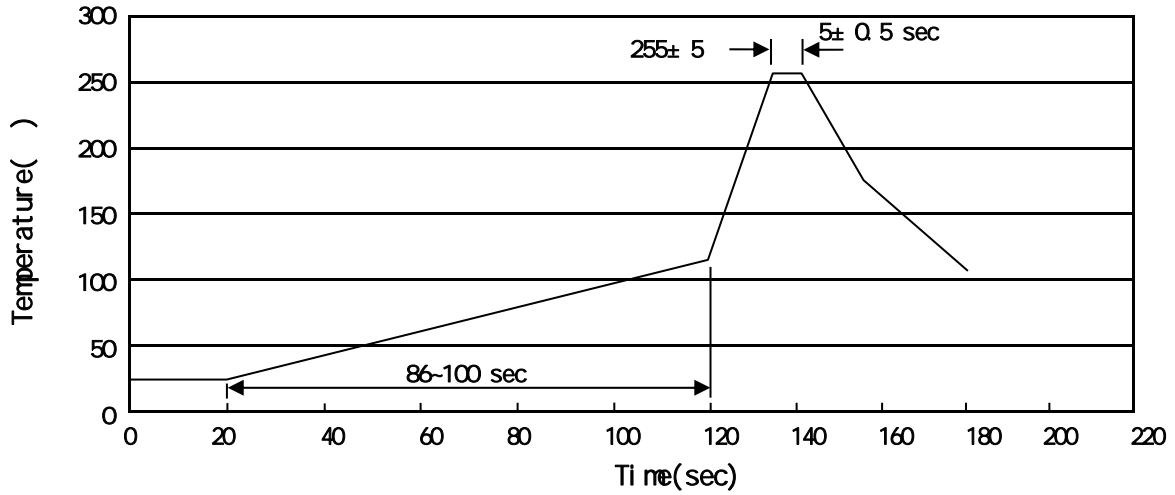
BR: Company Code

Q Automobile halogen-free product Code

MUR30650 Product Type Code

****: Lot No. Code, code change with Lot No

() / **Temperature Profile for Dip Soldering(Pb-Free)**



Note:

- | | | | |
|---|----------|-------------|--|
| 1 | 25 ~ 150 | 60 ~ 90sec; | 1. Preheating: 25~150 , Time: 60~90sec. |
| 2 | 255±5 | 5±0.5sec; | 2. Peak Temp.: 255±5 , Duration: 5±0.5sec. |
| 3 | 2 ~ 10 | /sec. | 3. Cooling Speed: 2~10 /sec. |

/ **Resistance to Soldering Heat Test Conditions**

270±5 10±1 sec. Temp.: 270±5 Time: 10±1 sec

/ **Packaging SPEC.**

/ BULK

Package Type	Units					Dimension (unit mm ³)		
TO-220/F/AC/FAC	200	10	2,000	5	10,000	135x190	237x172x102	560x245x195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
TO-220/F/AC/FAC	50	20	1,000	5	5,000	532x31.4x5.5	555x164x50	575x290x180

/ **Notices**