
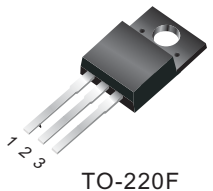


Description

Passivated high commutation triacs in a plastic envelope intended for use in circuits where high static and dynamic dV/dt and high dI/dt can occur. These devices will commutate the full rated ms current at the maximum rated junction temperature without the aid of a snubber.

<p>Symbol</p> 		<p>Simplified outline</p>  <p>TO-220F</p>	
Pin	Description		
1	Main terminal 1 (T1)		
2	Main terminal 2 (T2)		
3	gate (G)		
TAB	Main terminal		

Applications:

- ◆ Motor control
- ◆ Industrial and domestic lighting
- ◆ Heating
- ◆ Static switching

Features

- ◆ Blocking voltage to 600 V
- ◆ On-state RMS current to 12 A

SYMBOL	PARAMETER		Value	Unit
V_{DRM}	Repetitive peak off-state voltages	BCR12PM-8 BCR12PM-12	400 600	V
$I_{T(RMS)}$	RMS on-state current (full sine wave)		12	A
I_{TSM}	Non-repetitive peak on-state current (full cycle, T_j initial=25°C)		120	A

SYMBOL	PARAMETER	CONDITIONS	Value	TYP	MAX	UNIT
$R_{th(j-c)}$	Junction to case	-	-	-	3.5	°C/W
$R_{th(j-a)}$	Junction to ambient	-	-	-	60	°C/W

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Limiting values in accordance with the Maximum system(IEC 134)

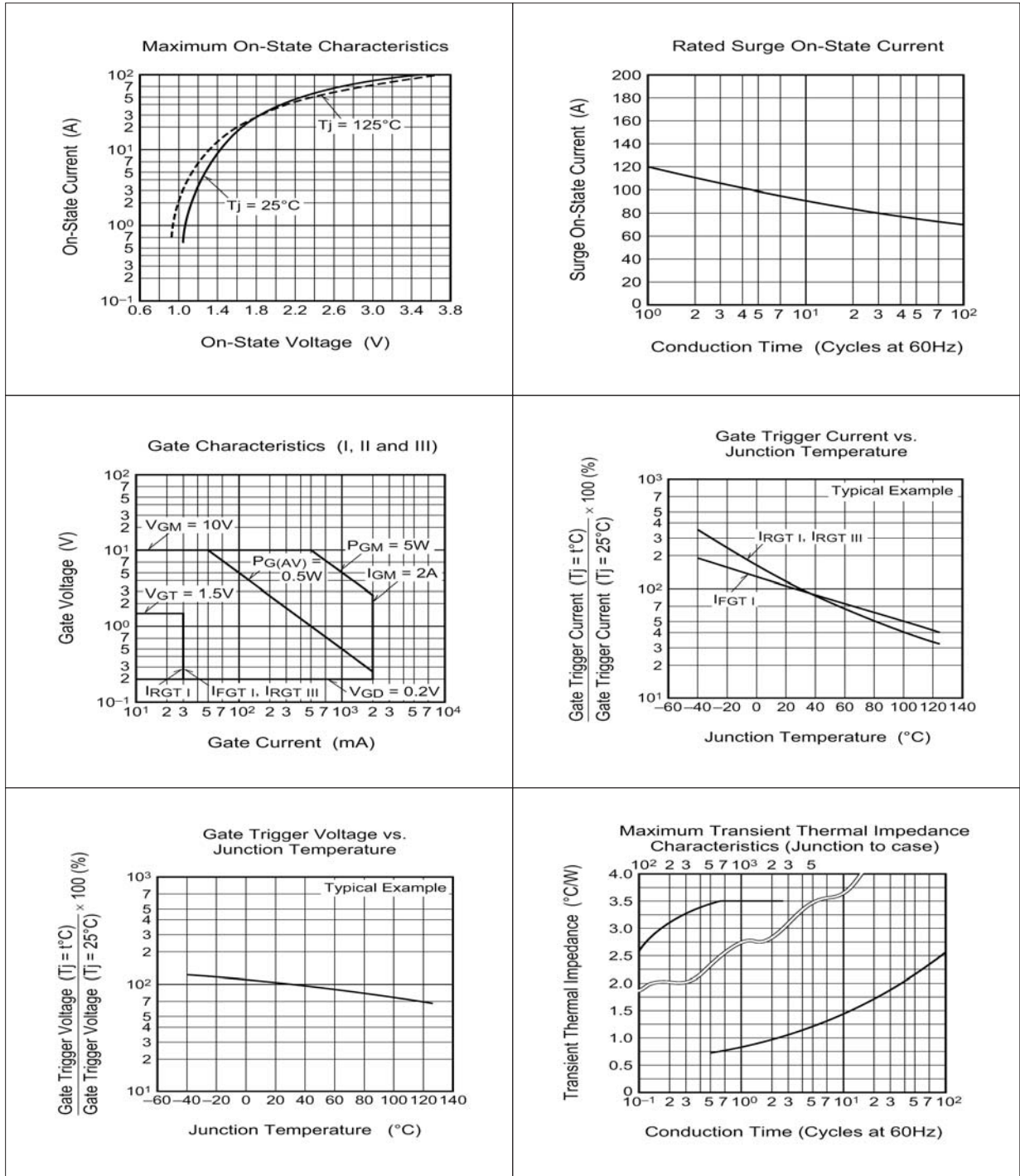
SYMBOL	PARAMETER	CONDITIONS	MIN	Value	UNIT
V_{DRM}	Repetitive peak off-state Voltages	BCR12PM-8 BCR12PM-12	-	400 600	V
$I_{T(RMS)}$	RMS on-state current	sine full wave; $T_c=74^{\circ}C$	-	12	A
I_{TSM}	surge on-state current	60Hz sinewave 1 full cycle, peak value,non-repetitive	-	120	A
V_{GM}	Peak gate voltage		-	10	V
I^2t	I^2t Value for fusing	Value corresponding to 1 cycle of half wave 60Hz,surge on-state current	-	60	A ² S
P_{GM}	Peak gate current		-	5	W
I_{GM}	Peak gate current		-	2	A
I_{DRM}	peak off-state,current		-	2.0	mA
Viso	Isolation voltage		-	1500	V
$P_{G(AV)}$	Average gate power		-	0.5	W
T_{stg}	Storage temperature		-40	125	$^{\circ}C$
T_j	Junction temperature		-40	125	$^{\circ}C$

$T_j=25^{\circ}C$ unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
Static characteristics						
I_{GT}	Gate trigger current	$T_j=25^{\circ}C, V_D=6V, R_L=6\Omega; R_g=330\Omega$ MT2+Gate+ MT2+Gate- MT2-Gate-	-	-	30 30 30	mA mA mA
V_{GT}	Gate trigger voltage	$T_j=25^{\circ}C, V_D=6V, R_L=6\Omega; R_g=330\Omega$ MT2+Gate+ MT2+Gate- MT2-Gate-	-	-	1.5 1.5 1.5	V V V
V_{GD}	Gate non trigger voltage	$T_j=125^{\circ}C, V_D=1/2 V_{DRM}$	0.2	-	-	V
V_{TM}	On-state voltage	$I_{TM}=20A T_c=25^{\circ}C$	-	-	1.6	V
(Dv/dt)c	Commutating voltage	$T_j=125^{\circ}C$	10	-	-	V/us

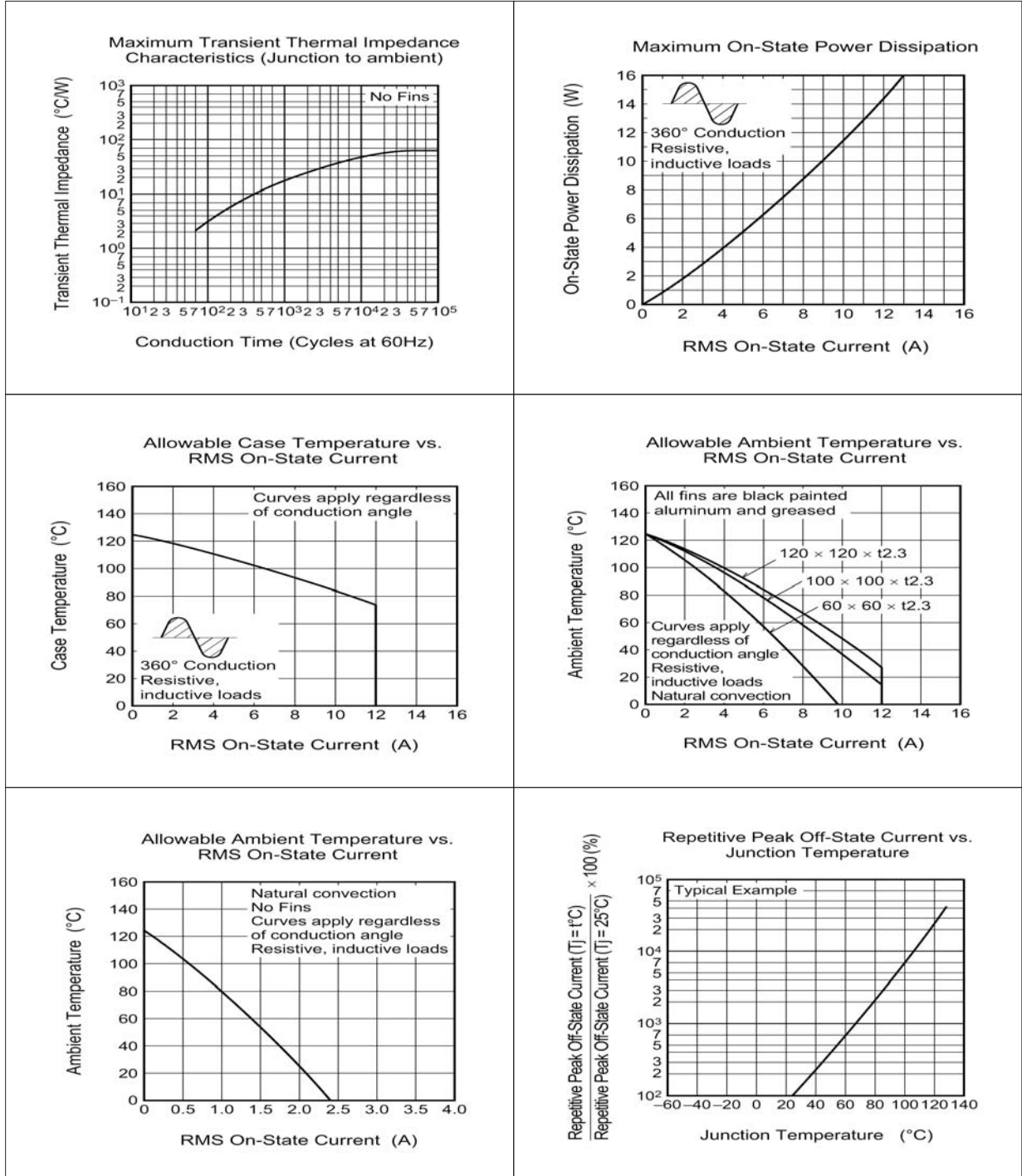
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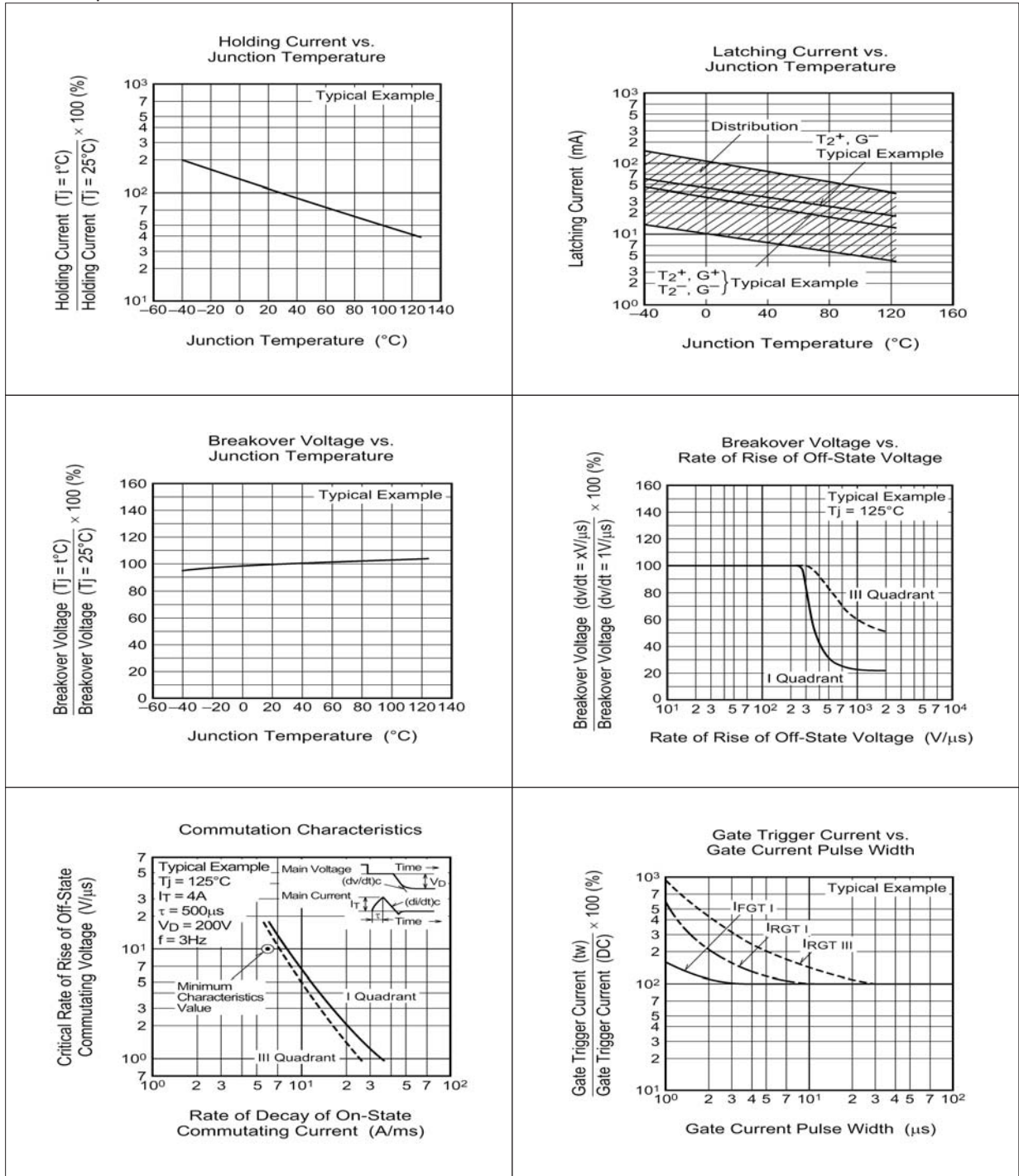
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BCR12PM

Three quadrant triacs

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MECHANICAL DATA

Dimensions in mm

Net Mass: 2g