


BCR08AS

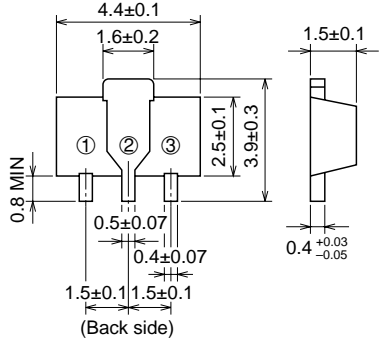
LOW POWER USE
NON-INSULATED TYPE, PLANAR PASSIVATION TYPE

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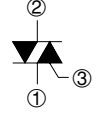


- **IT (RMS)** **0.8A**
- **VDRM** **600V**
- **IFGT I , IRGT I , IRGT III** **5mA**
- **IFGT III** **10mA**

OUTLINE DRAWING Dimensions
in mm



(Back side)



① T1 TERMINAL
② T2 TERMINAL
③ GATE TERMINAL

SOT-89

APPLICATION

Hybrid IC, solid state relay,
control of household equipment such as electric fan · washing machine,
other general purpose control applications

MAXIMUM RATINGS

Symbol	Parameter	Voltage class	
		12 (marked "BF")	
			Unit
VDRM	Repetitive peak off-state voltage *1	600	V
VDSM	Non-repetitive peak off-state voltage *1	720	V

Symbol	Parameter	Conditions	Ratings	Unit
IT (RMS)	RMS on-state current	Commercial frequency, sine full wave 360° conduction, Ta=40°C *3	0.8	A
ITSM	Surge on-state current	60Hz sinewave 1 full cycle, peak value, non-repetitive	8	A
I ² t	I ² t for fusing	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current	0.26	A ² s
PGM	Peak gate power dissipation		1	W
PG (AV)	Average gate power dissipation		0.1	W
VGM	Peak gate voltage		6	V
IGM	Peak gate current		1	A
Tj	Junction temperature		-40 ~ +125	°C
Tstg	Storage temperature		-40 ~ +125	°C
—	Weight	Typical value	48	mg

*1. Gate open.

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ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Test conditions	Limits			Unit	
			Min.	Typ.	Max.		
IDRM	Repetitive peak off-state current	T _j =125°C, V _{DRM} applied	—	—	1.0	mA	
V _{TM}	On-state voltage	T _c =25°C, I _{TM} =1.2A, Instantaneous measurement	—	—	2.0	V	
V _{FGT I}	Gate trigger voltage *2	T _j =25°C, V _D =6V, R _L =6Ω, R _G =330Ω	I	—	—	2.0	V
V _{RGT I}			II	—	—	2.0	V
V _{RGT III}			III	—	—	2.0	V
V _{FGT III}			IV	—	—	2.0	V
I _{FGT I}	Gate trigger current *2	T _j =25°C, V _D =6V, R _L =6Ω, R _G =330Ω	I	—	—	5	mA
I _{RGT I}			II	—	—	5	mA
I _{RGT III}			III	—	—	5	mA
I _{FGT III}			IV	—	—	10	mA
V _{GD}	Gate non-trigger voltage	T _j =125°C, V _D =1/2V _{DRM}	0.1	—	—	V	
R _{th(j-a)}	Thermal resistance	Junction to case *3	—	—	65	°C/W	
(dv/dt) _c	Critical-rate of rise of off-state commutating voltage *4	T _j =125°C	0.5	—	—	V/μs	

*2. Measurement using the gate trigger characteristics measurement circuit.

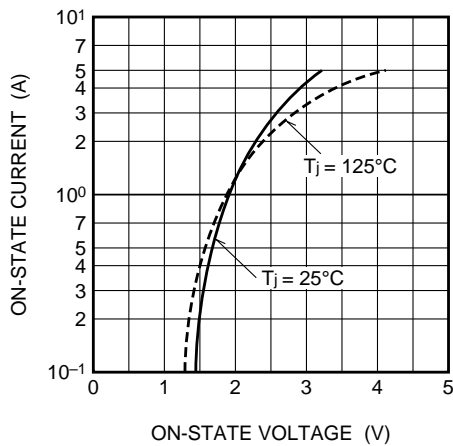
*3. Mounted on 25mm × 25mm × 10.7mm ceramic plate with solder.

*4. Test conditions of the critical-rate of rise of off-state commutating voltage is shown in the table below.

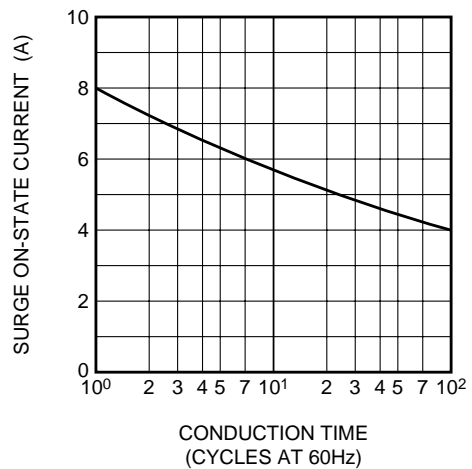
Test conditions	Commutating voltage and current waveforms (inductive load)
1. Junction temperature T _j =125°C 2. Rate of decay of on-state commutating current (di/dt) _c =-0.4A/ms 3. Peak off-state voltage V _D =400V	

PERFORMANCE CURVES

MAXIMUM ON-STATE CHARACTERISTICS



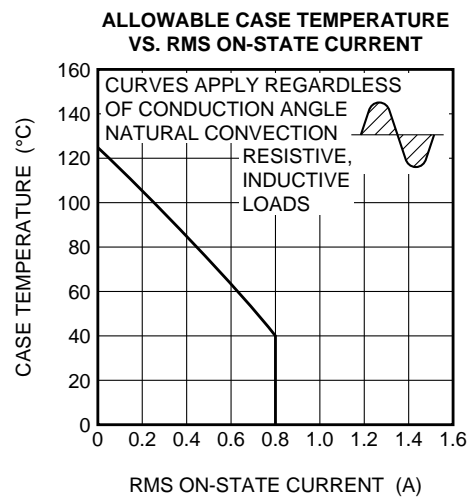
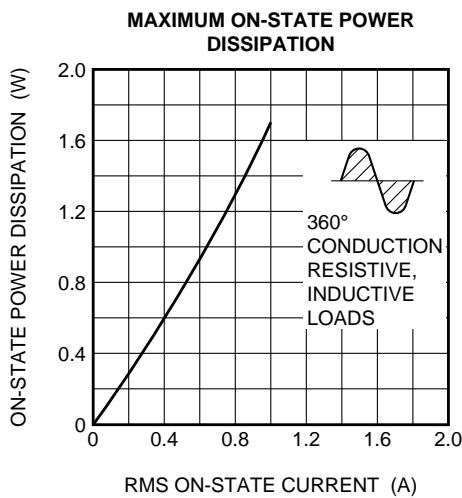
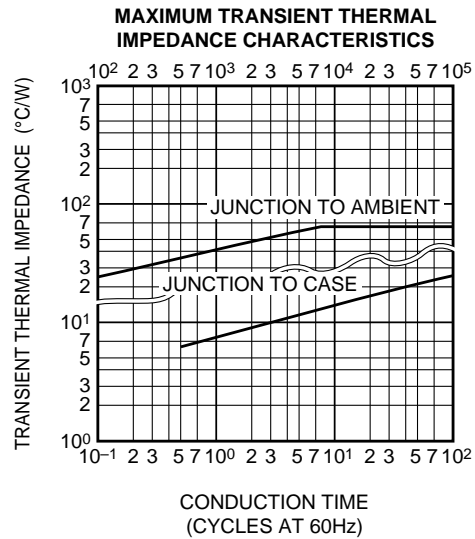
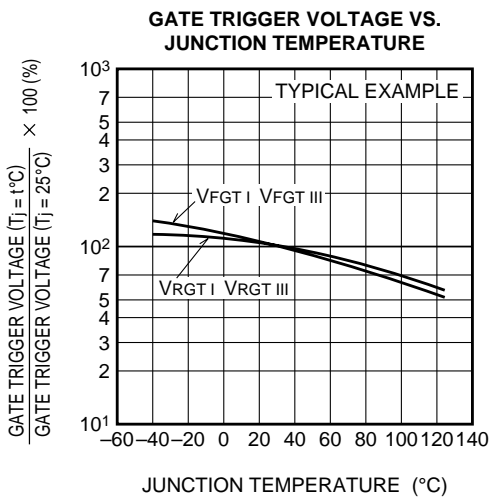
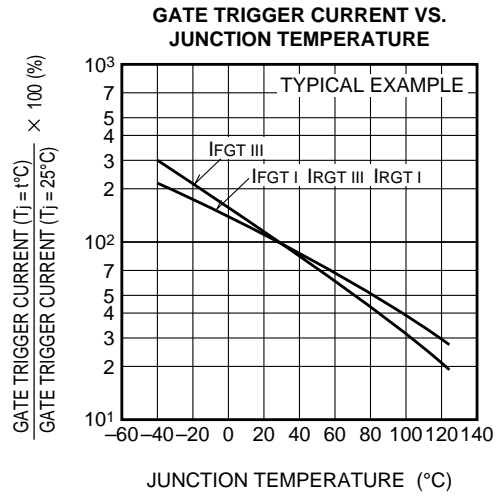
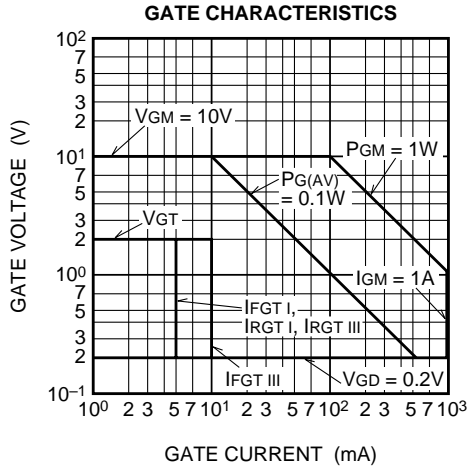
RATED SURGE ON-STATE CURRENT



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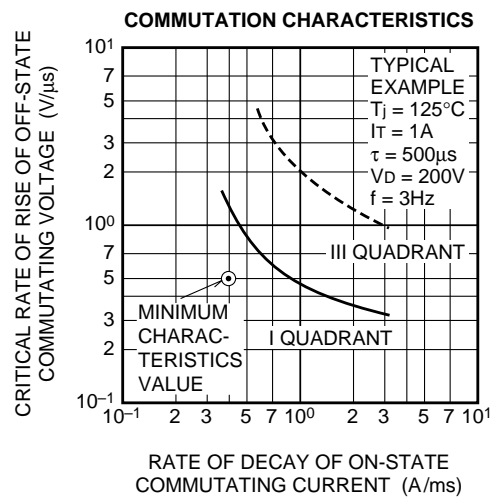
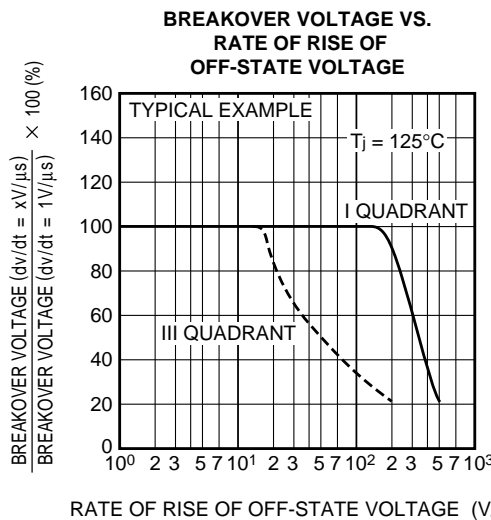
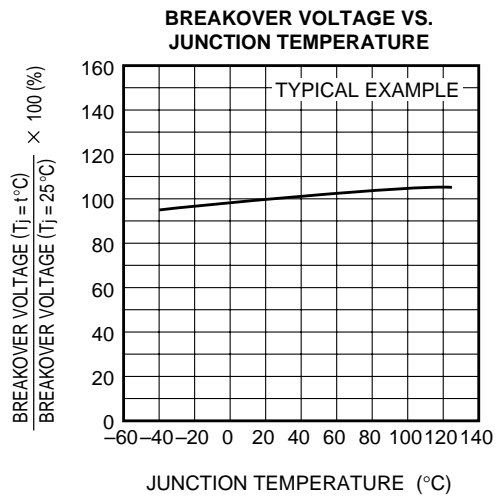
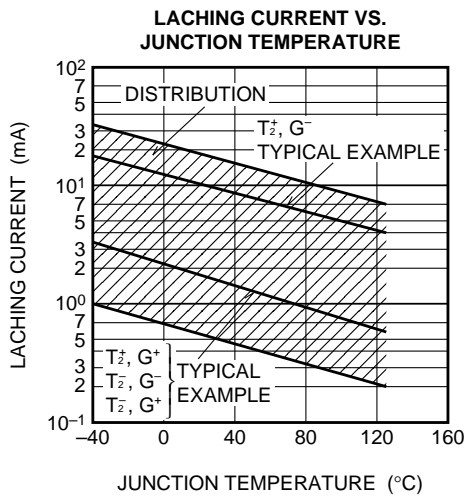
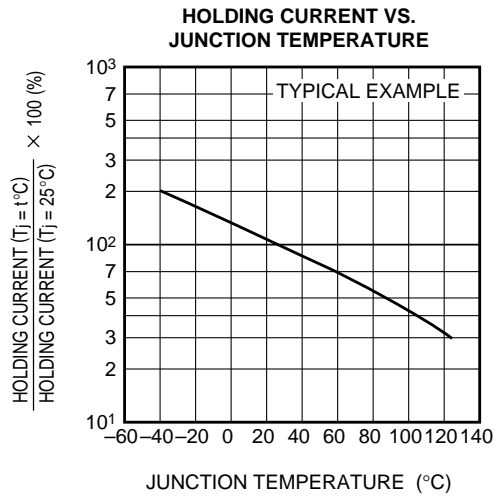
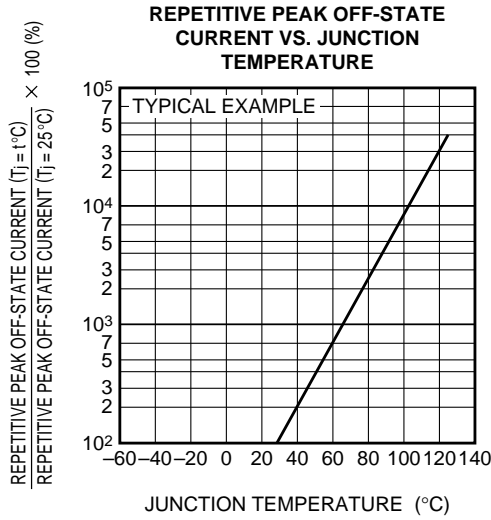
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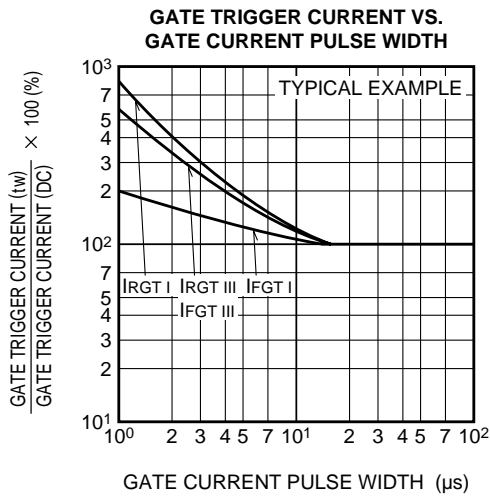
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GATE TRIGGER CHARACTERISTICS TEST CIRCUITS

