

BCR3AS**LOW POWER USE****NON-INSULATED TYPE, PLANAR PASSIVATION TYPE****ELECTRICAL CHARACTERISTICS**

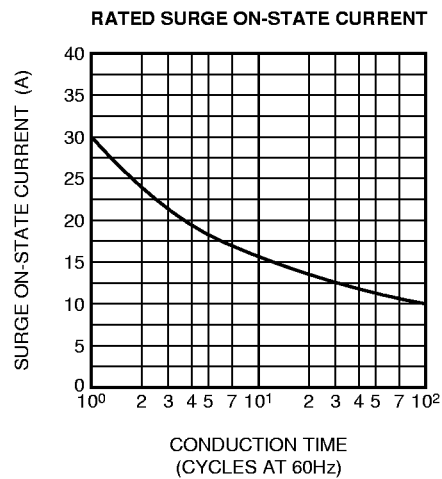
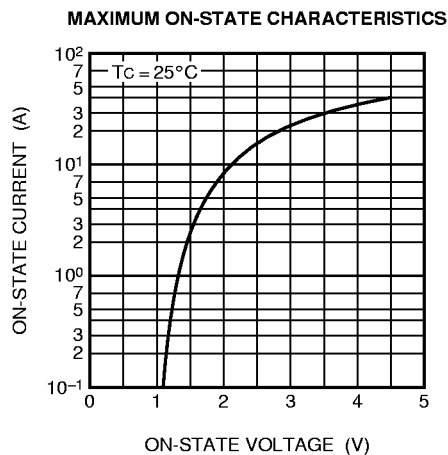
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{DRM}	Repetitive peak off-state current	$T_J=125^{\circ}\text{C}$, V_{DRM} applied	—	—	2.0	mA
V_{TM}	On-state voltage	$T_C=25^{\circ}\text{C}$, $I_{TM}=4.5\text{A}$, Instantaneous measurement	—	—	1.7	V
$V_{FGT} !$	Gate trigger voltage *2	$T_J=25^{\circ}\text{C}$, $V_D=6\text{V}$, $R_L=6\Omega$, $R_G=330\Omega$	—	—	1.5	V
$V_{RGT} !$			—	—	1.5	V
$V_{RGT} \#$			—	—	1.5	V
$I_{FGT} !$	Gate trigger current *2	$T_J=25^{\circ}\text{C}$, $V_D=6\text{V}$, $R_L=6\Omega$, $R_G=330\Omega$	—	—	15*2	mA
$I_{RGT} !$			—	—	15*2	mA
$I_{RGT} \#$			—	—	15*2	mA
V_{GD}	Gate non-trigger voltage	$T_J=125^{\circ}\text{C}$, $V_D=1/2V_{DRM}$	0.2	—	—	V
$R_{th(j-c)}$	Thermal resistance	Junction to case *4	—	—	3.8	$^{\circ}\text{C/W}$
$(dv/dt)_c$	Critical-rate of rise of off-state commutating voltage		*3	—	—	V/ μs

*2. High sensitivity ($I_{GT} \leq 10\text{mA}$) is also available.

*3. The critical-rate of rise of the off-state commutating voltage is shown in the table below.

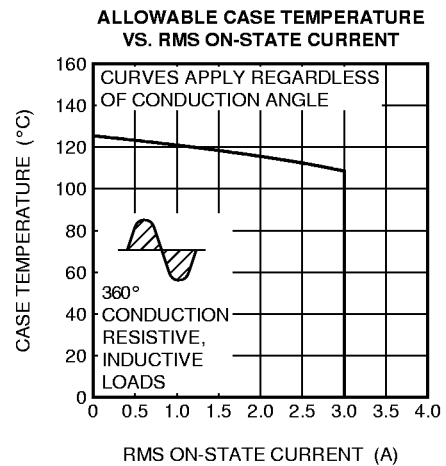
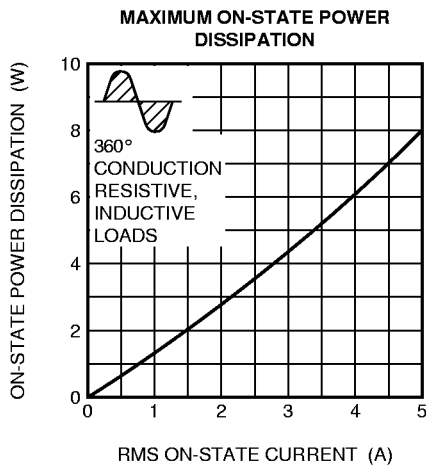
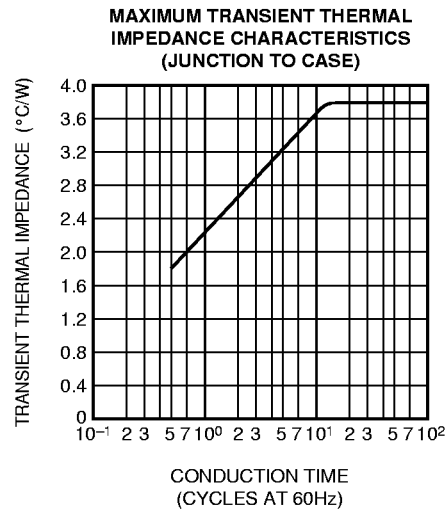
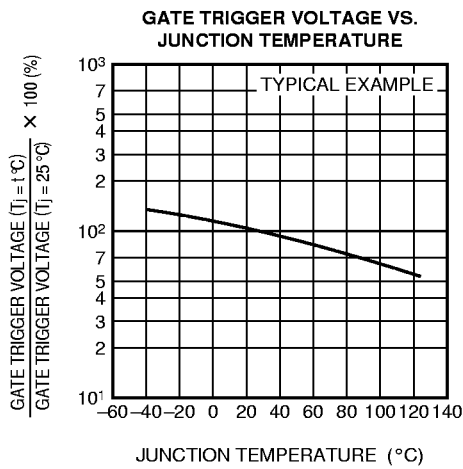
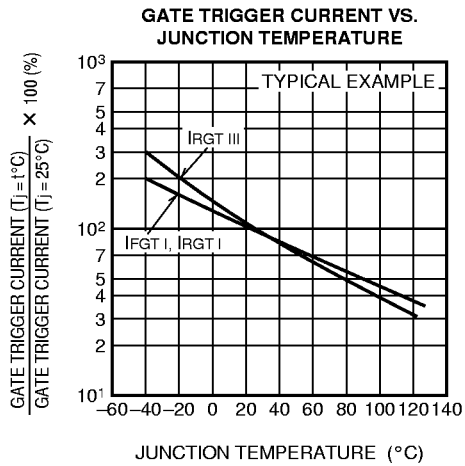
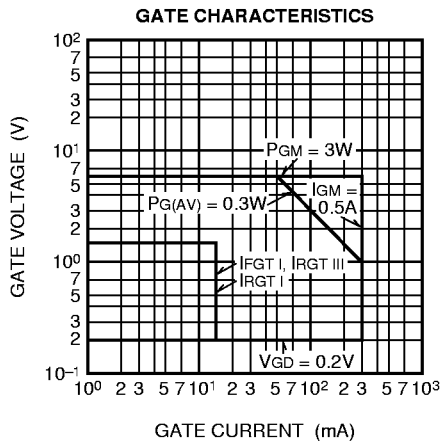
*4. Case temperature is measured on the T2 terminal.

Voltage class	V_{DRM} (V)	$(dv/dt)_c$		Test conditions	Commutating voltage and current waveforms (inductive load)
		Min.	Unit		
8	400	5	V/ μs	1. Junction temperature $T_J=125^{\circ}\text{C}$ 2. Rate of decay of on-state commutating current $(di/dt)_c=-1.5\text{A/ms}$ 3. Peak off-state voltage $V_D=400\text{V}$	
12	600				

PERFORMANCE CURVES

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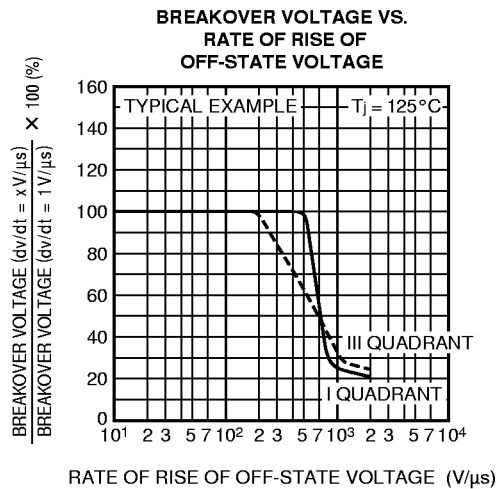
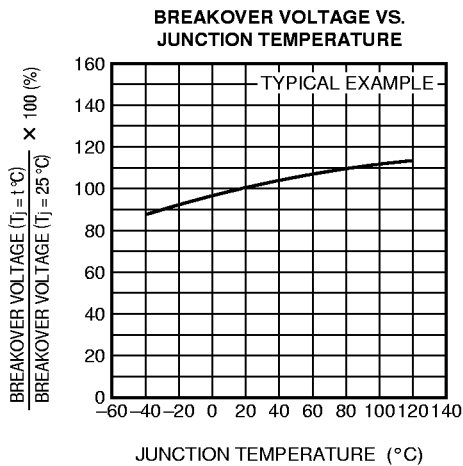
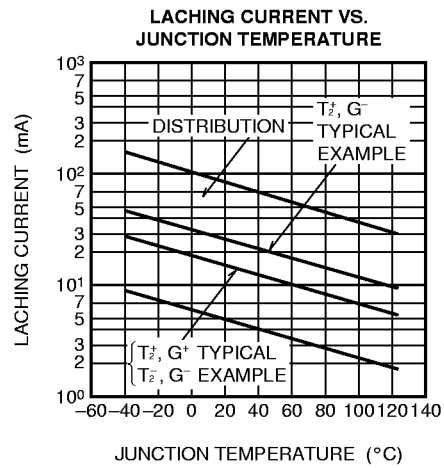
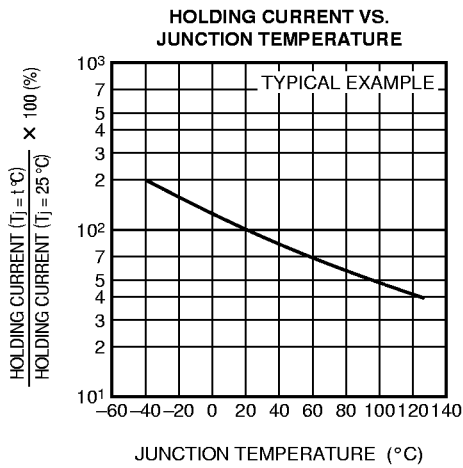
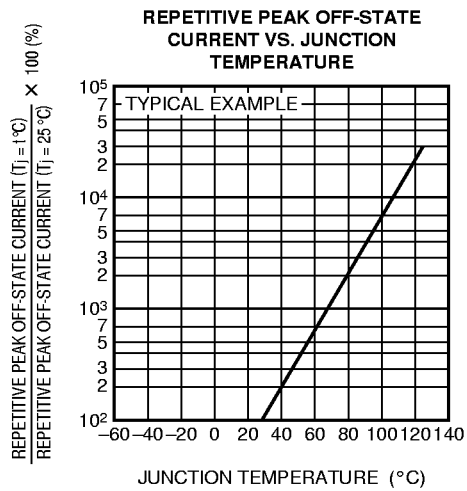
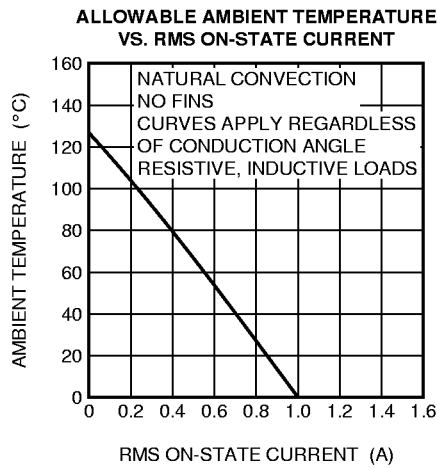
LOW POWER USE
NON-INSULATED TYPE, PLANAR PASSIVATION TYPE



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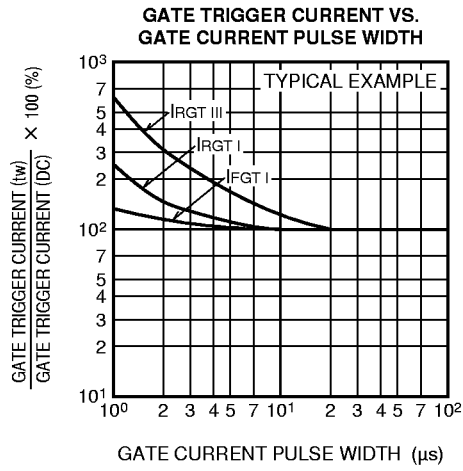
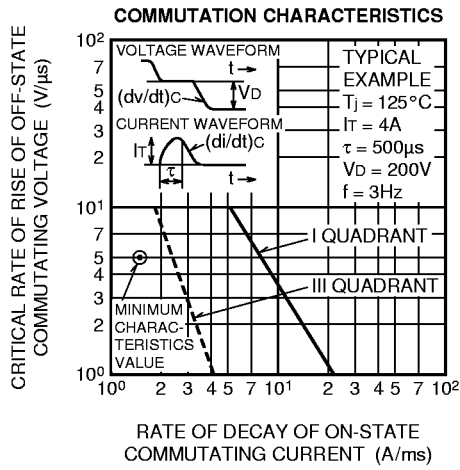
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GATE TRIGGER CHARACTERISTICS TEST CIRCUITS

