

BRX44 BRX47
BRX45 BRX48
BRX46 BRX49

SILICON CONTROLLED RECTIFIER
0.8 AMP, 30 THRU 400 VOLTS



TO-92 CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BRX44 series types are PNP Silicon Controlled Rectifiers manufactured in a TO-92 case, designed for control systems and sensing circuit applications.

MARKING CODE: FULL PART NUMBER

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	BRX44	BRX45	BRX46	BRX47	BRX48	BRX49	UNITS
Peak Repetitive Off-State Voltage	$V_{\text{DRM}}, V_{\text{RRM}}$	30	60	100	200	300	400	V
RMS On-State Current ($T_C=40^\circ\text{C}$)	$I_{\text{T(RMS)}}$			0.8				A
Average On-State Current ($T_C=40^\circ\text{C}$)	$I_{\text{T(AV)}}$			0.5				A
Nonrept. On-State Current ($T_C=60^\circ\text{C}$)	I_{TSM}			10				A
Fusing Current ($t=10\text{ms}$)	I^2t			0.24				A ² s
Peak Reverse Gate Voltage ($I_{\text{GR}}=10\mu\text{A}$)	V_{GRM}			8.0				V
Peak Gate Current ($t=10\mu\text{s}$)	I_{GM}			1.0				A
Peak Gate Dissipation ($t=10\mu\text{s}$)	P_{GM}			2.0				W
Gate Dissipation ($t=20\text{ms}$)	$P_{\text{G (AV)}}$			0.1				W
Operating and Storage								
Junction Temperature	$T_{\text{J}}, T_{\text{stg}}$			-40 to +125				$^\circ\text{C}$
Thermal Resistance	θ_{JC}			100				$^\circ\text{C/W}$
Thermal Resistance	θ_{JA}			200				$^\circ\text{C/W}$

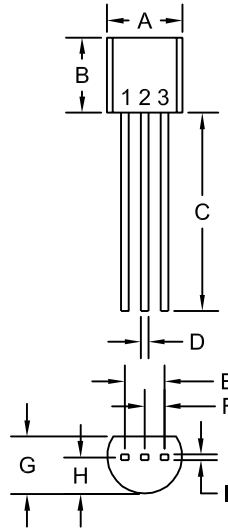
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_C=25^\circ\text{C}$		1.0	μA
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$		0.1	mA
V_{TM}	$I_{\text{T}}=1.0\text{A}$		1.7	V
I_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=10\Omega$		200	μA
V_{GT}	$V_{\text{D}}=6.0\text{V}, R_{\text{L}}=10\Omega$		0.8	V
I_{H}	$R_{\text{GK}}=1.0\text{K}\Omega$		5.0	mA
I_{L}	$R_{\text{GK}}=1.0\text{K}\Omega$		6.0	mA
dv/dt	$V_{\text{D}}=0.67\text{V} \times V_{\text{DRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$	100		V/ μs
di/dt	$I_{\text{G}}=10\text{mA}, di_{\text{G}}/dt=0.1\text{A}/\mu\text{s}, T_C=125^\circ\text{C}$	30		A/ μs

R0 (27-April 2004)

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TO-92 CASE - MECHANICAL OUTLINE



R1

LEAD CODE:

- 1) ANODE
- 2) GATE
- 3) CATHODE

MARKING CODE:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

R0 (27-April 2004)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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