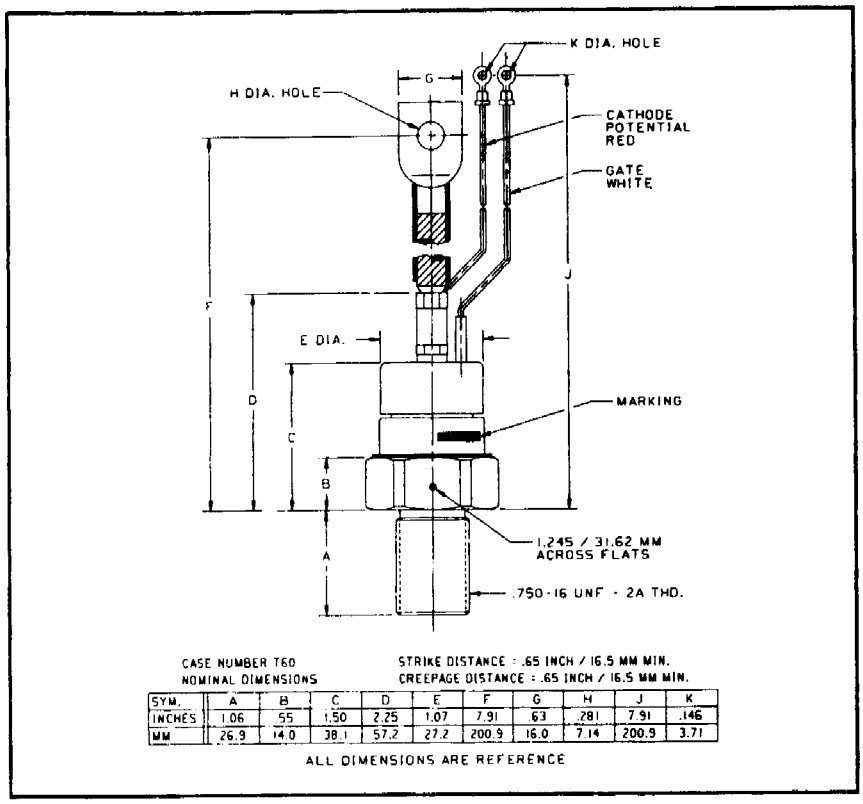
New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005

Phase Control SCR

175 Amperes Average
1200 Volts



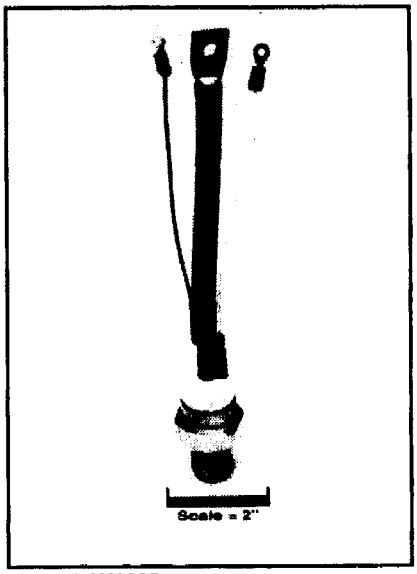
CASE NUMBER T60
NOMINAL DIMENSIONS

STRIKE DISTANCE : .65 INCH / 16.5 MM MIN.
CREEPAGE DISTANCE : .65 INCH / 16.5 MM MIN.

SYM.	A	B	C	D	E	F	G	H	J	K
INCHES	1.06	.55	1.50	2.25	1.07	7.91	.63	.281	7.91	.146
MM	26.9	14.0	38.1	57.2	27.2	200.9	16.0	7.14	200.9	3.71

ALL DIMENSIONS ARE REFERENCE

2N3884-2N3895 (Outline Drawing)



2N3884-2N3895
Phase Control SCR
175 Amperes Average, 1200 Volts

Description:
Powerex Silicon Controlled Rectifiers (SCR) are designed for phase control applications. These are all-diffused, compression bonded encapsulated (CBE) devices employing the field-proven amplifying (di/namic) gate.

Features:
- ☐ Low On-State Voltage
- ☐ High di/dt
- ☐ High dv/dt
- ☐ Hermetic Packaging
- ☐ Excellent Surge and I^2t Ratings

Applications:
- ☐ Power Supplies
- ☐ Battery Chargers
- ☐ Motor Control

Ordering Information:
Select the complete six digit part number you desire from the table, i.e. 2N3895 is a 1200 Volt, 175 Ampere Phase Control SCR.

Type	Voltage V_{DRM} V_{RRM}	Current $I_{T(av)}$
2N3884	50	175
2N3885	100	
2N3886	200	
2N3887	300	
2N3888	400	
2N3889	500	
2N3890	600	
2N3891	700	
2N3892	800	
2N3893	900	
2N3894	1000	
2N3895	1200	

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2N3884-2N3895
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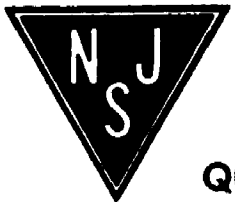
Electrical and Thermal Characteristics

Characteristics	Symbol	Test Conditions	2N3884-3895	Units
Voltage—Blocking State Maximums				
Forward Leakage, Peak	I_{DRM}	T_J = 125°C, V_{DRM} = rated	25	mA
Reverse Leakage, Peak	I_{RRM}	T_J = 125°C, V_{RRM} = rated	25	mA
Current—Conducting State Maximums				
Peak On-State Voltage	V_{TM}	I_{TM} = 625A, T_J = 25°C	1.55	Volts
Switching				
Typical Turn-Off Time	t_q	I_T = 150A, T_J = 125°C, di_R/dt = 12.5A/μsec, reapplied dv/dt = 20V/μsec linear to 0.8 V_{DRM}	100	μsec
Typical Turn-On Time	t_{on}	I_T = 100A, V_D = 100V	5	μsec
Min. Critical dv/dt exponential to V_{DRM}	dv/dt	T_J = 125°C	300	V/μsec
Thermal				
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$		.13	°C/Watt
Case to Sink, Lubricated	$R_{\theta CS}$		.075	°C/Watt
Gate—Maximum Parameters				
Gate Current to Trigger	I_{GT}	T_J = 25°C, V_D = 12V	150	mA
Gate Voltage to Trigger	V_{GT}	T_J = 25°C, V_D = 12V	3	Volts
Non-Triggering Gate Voltage	V_{GDM}	T_J = 125°C, V = rated V_{DRM}	.15	Volts
Peak Forward Gate Current	I_{GTM}		4	Amperes
Peak Reverse Gate Voltage	V_{GRM}		5	Volts



Quality Semi-Conductors