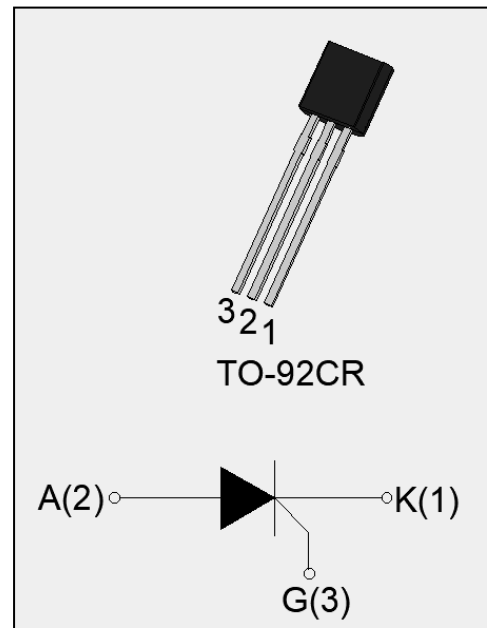




The CR03AM-16 SCR provides high dV/dt rate with strong resistance to electromagnetic interface. It is especially recommended for use on residual current circuit breaker, straight hair, igniter etc. Package TO-92CR is RoHS compliant.

Symbol	Value	Unit
$I_{T(RMS)}$	1.25	A
V_{DRM} / V_{RRM}	1250	V
I_{GT}	200	μA



Storage junction temperature range	T_{stg}	-40-150	
Operating junction temperature range	T_j	-40-110	
Repetitive peak off-state voltage ($T_j=25^\circ C$)	V_{DRM}	1250	V
Repetitive peak reverse voltage ($T_j=25^\circ C$)	V_{RRM}	1250	V
Average on-state current ($T_c = 42^\circ C$)	$I_{T(AV)}$	0.8	A
RMS on-state current ($T_c = 42^\circ C$)	$I_{T(RMS)}$	1.25	A
Non repetitive surge peak on-state current ($t_p=10ms, T_j=25^\circ C$)	I_{TSM}	25	A
Non repetitive surge peak on-state current ($t_p=8.3ms, T_j=25^\circ C$)		28	
I^2t value for fusing ($t_p=10ms, T_j=25^\circ C$)	I^2t	3.1	A^2s
Critical rate of rise of on-state current ($I_G=2y I_{GT}, f=100Hz, T_j=110^\circ C$)	di/dt	100	$A/\mu s$
Peak gate current ($t_p=20\mu s, T_j=110^\circ C$)	I_{GM}	1.2	A
Average gate power dissipation ($T_j=110^\circ C$)	$P_{G(AV)}$	0.2	W



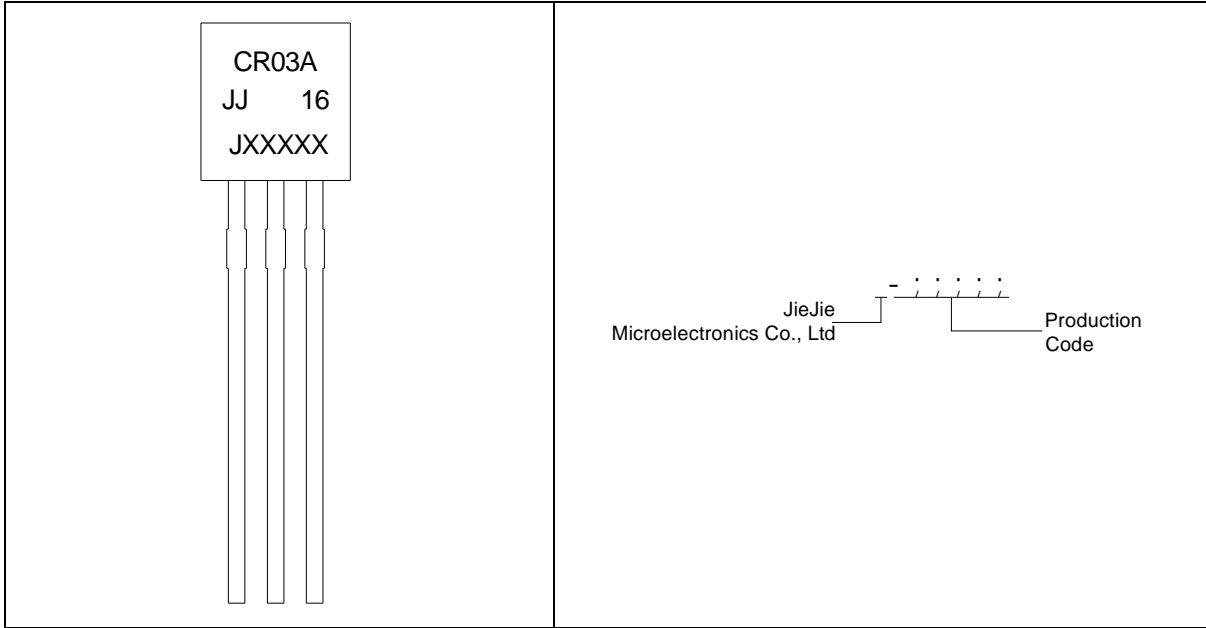
Peak gate power	P_{GM}	2	W
Peak pulse voltage ($T_j=25$; non-repetitive, off-state; FIG.7)	V_{pp}	1	kV

($T_j \neq 25$ unless otherwise specified)

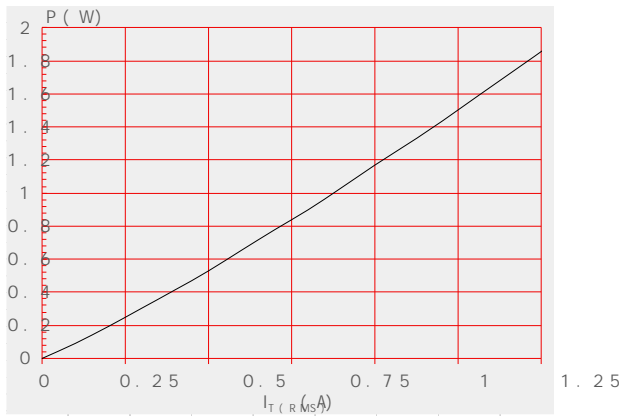
I_{GT}	$V_D=12V R_L=33$	-	50	200	μA
V_{GT}		-	0.6	0.8	V
V_{GD}	$V_D=V_{DRM} T_j=110$	0.2	-	-	V
I_L	$I_G=1.2 I_{GT}$	-	-	5	mA
I_H	$I_T=0.05A$	-	-	4	mA
dV/dt	$V_D=800V T_j=110 R_{GK}=1K$	400	-	-	V/ μs
	$V_D=800V T_j=110 R_{GK}=220$	1000	-	-	
t_{on}	$I_G=10mA I_A=20mA I_R=2mA$	-	2	-	μs
t_{off}	$T_j=25$	-	50	-	μs

V_{TM}	$I_T=2A t_p=380\mu s$	$T_j=25$	1.3	V
V_{TO}	Threshold voltage	$T_j=110$	0.8	V
R_D	Dynamic Resistance	$T_j=110$	0.2	
I_{DRM}	$V_D=V_{DRM} V_R=V_{RRM}$	$T_j=25$	5	μA
I_{RRM}		$T_j=110$	0.3	mA

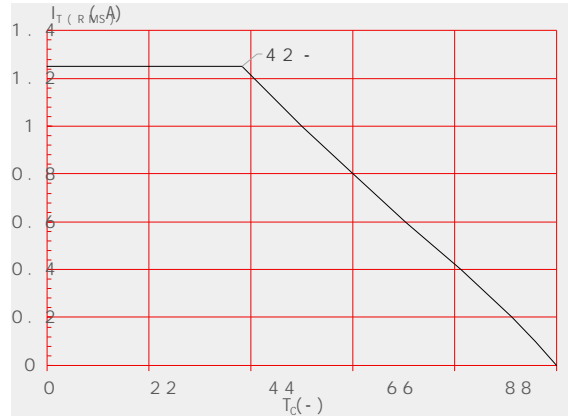
$R_{th(j-c)}$	junction to case (DC)	50	/W
$R_{th(j-a)}$	junction to ambient (DC)	130	/W



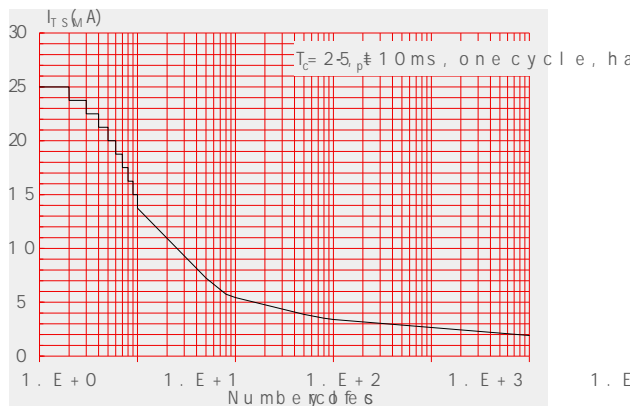
Maximum power dissipation versus RMS on-state current



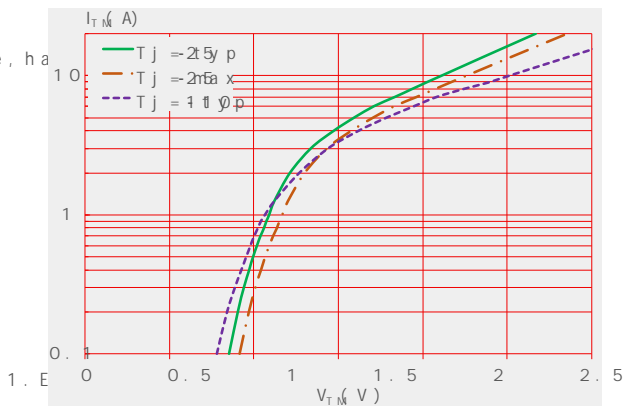
RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles



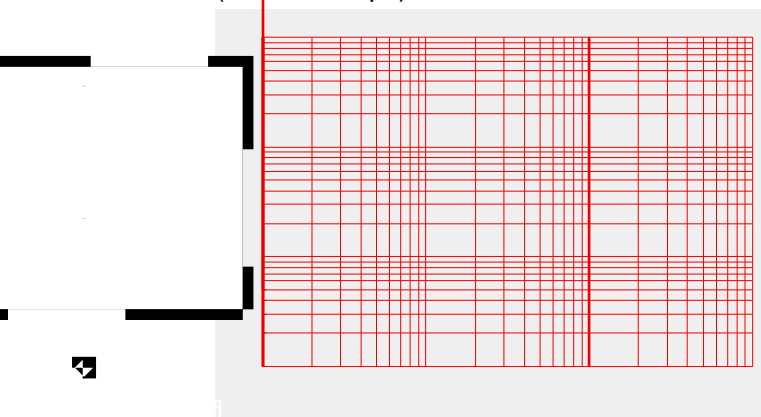
On-state characteristics





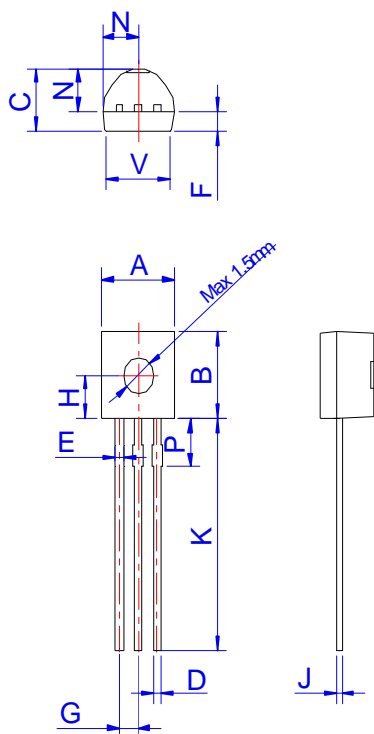
Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10\text{ms}$, and corresponding value of I^2t ($di/dt < 100\text{A}/\mu\text{s}$)

Relative variations of gate trigger current, holding current and latching current versus junction temperature





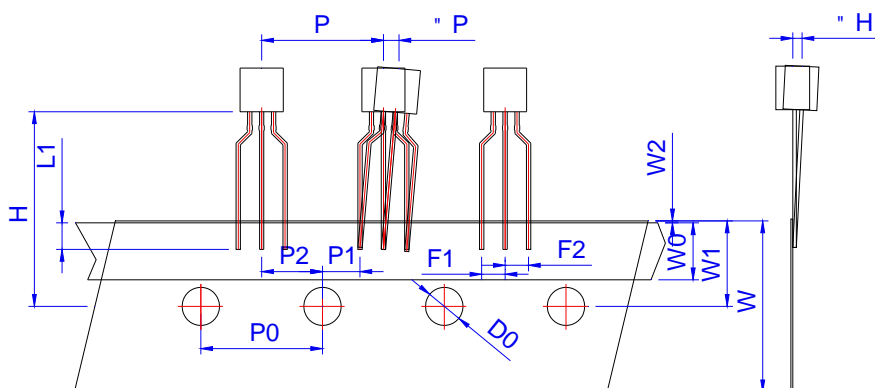
Date	Revision	Changes
Apr.12, 2023	A.1.0	Last update



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.407		0.533	0.016		0.021
E	0.50		0.70	0.020		0.028
F	1.00		1.20	0.039		0.047
G	1.10		1.40	0.043		0.055
H	2.30		2.60	0.091		0.102
J	0.36		0.50	0.014		0.020
K	12.70		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V	4.40		5.00	0.173		0.197



TO-92CR	Bulk Pack	1,000	10,000	50,000



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
P	12.40	12.70	13.00	0.488	0.500	0.512
P0	12.40	12.70	13.00	0.488	0.500	0.512
P1	3.55	3.85	4.15	0.140	0.152	0.163
P2	6.05	6.35	6.65	0.238	0.250	0.262
" P	-1.0	0	1.0	-0.039	0	0.039
F1 F2	2.20	2.50	2.80	0.087	0.098	0.110
F1-F2	-0.3	0	0.3	-0.012	0	0.012
W	17.50	18.00	19.00	0.689	0.709	0.748
W0	5.50	6.00	6.50	0.217	0.236	0.256
W1	8.50	9.00	9.50	0.335	0.354	0.374
W2			1.0			0.039
D0	3.80	4.0	4.20	0.150	0.157	0.165
" H	-1.0	0	1.0	-0.039	0	0.039
L1	2.5			0.098		
H	18.0	19.0	20.0	0.709	0.748	0.787

TO-92CR	Tape & Reel	/	2,000	20,000



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