

DESCRIPTION:

Highly sensitive triggering levels, the MCR100-8 (KKG106) Series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

QUICK REFERENCE【參考特性】

產品型號 Part Number	工業型號 Industry Part №	通態電流均方值 $I_{T(RMS)}$ (A)	斷態重復峰值電壓 V_{DRM}/V_{RRM} (V)	門極觸發電流 $I_{GT}(\mu A/mA)$	封裝外形 Package	包裝方式 Packing	元件標識 Marking
MCR100-8 KKG106	MCR100-8	0.8A	900V	$\leq 200\mu A$	TO-92 TO-226AA or TO-92 Tape & Reel	1Kpcs/Bulk 10Kpcs/Box TO-92 Tape: 2000pcs/Box 每袋1Kpcs 每盒10Kpcs 編帶:每盒2Kpcs 0.20g / Pcs 每枚重量0.2克	 元件標識可按 客戶指定要求
說明 Explain	①此規格為高靈敏度-微觸發、TO-92塑封單向可控矽 ②以常規電壓規格出貨,高壓規格機種(特殊品種),批量交期6~8周 ③門極觸發電流IGT值可根據客戶要求細分至多個規格,單位 μA (微安)						

PINNING: TO-92 (TO-226AA) or TO-92 Tape & Reel

TO-92直插封裝 或 TO-92直插編帶封裝

Pin 管腳排列	Symbol 對應極性	Description 極性名詞	Description 極性含義	Practicality in Pin Arrange 元件實物與管腳排列對照	Pin Polarity Circuit diagram 腳位與極性之電路符號表示
1	K	Cathode	陰極		1=K 2=G 3=A
2	G	Gate	門-控制極		
3	A	Anode	陽極		

ABSOLUTE MAXIMUM RATINGS

Parameter & Test Conditions		Symbol	Value	Unit
Storage junction Temperature Range		Tstg	-40 ~ +150	°C
Operating Junction Temperature Range		Tj	-40 ~ +110	
Repetitive Peak Off-State Voltage	Tj=125°C	V_{DRM}	900	V
Repetitive Peak Reverse Voltage	Tj=125°C	V_{RRM}	900	
RMS on-state current (180 conduction angle)	Tc=77°C	$I_{T(RMS)}$	0.8	A
Average on-state current (180 conduction angle)	Tc=77°C	$I_{T(AV)}$	0.5	
Non repetitive surge peak on-state current (Tj=25°C)	tp=10ms	I_{TSM}	9	
	tp=8.3ms		10	
I ² t Value for fusing	tp=10ms	I ² t	0.415	A ² s
Peak gate current (tp=20 μ S, Tj=110°C)		I_{GT}	0.2	A
Average gate power dissipation (Tj=110°C)		$P_{G(AV)}$	0.1	W

■ ELECTRICAL CHARACTERISTICS (Tj=25°C Unless Otherwise specifies)			MCR100-8 KKG106			
SYMBOL	Parameter & Test Conditions		Min	Typ	Max	Unit
I _{GT}	V _D =6V _{DC} , R _L =100Ω (T _C =25°C)		--	40	200	μA
V _{GT}			--	0.6	0.8	V
V _{GD}	V _D =V _{DRM} , R _L =3.3KΩ, R _{GK} =1KΩ, Tj=110°C		0.2	--	--	
I _L	I _G =1mA, R _{GK} =1KΩ		--	--	6	mA
I _H	I _T =50mA, R _{GK} =1KΩ		--	--	5	
V _{TM}	I _T =1A, tp=380μS	Tj=25°C	--	1.3	1.7	V
dv/dt	V _D =67%V _{DRM} , R _{GK} =1KΩ	Tj=110°C	10	--	--	V/μs
dv/dt	V _D =V _{DRM} , R _{GK} =1KΩ	Tj=25°C	--	--	5	μA
		Tj=110°C	--	--	0.1	mA
I _{RRM}	V _D =V _{RRM} , R _{GK} =1KΩ	Tj=25°C	--	--	5	μA
		Tj=110°C	--	--	0.1	mA

■ THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
Rth(J-C)	TO-92	75	°C/W

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

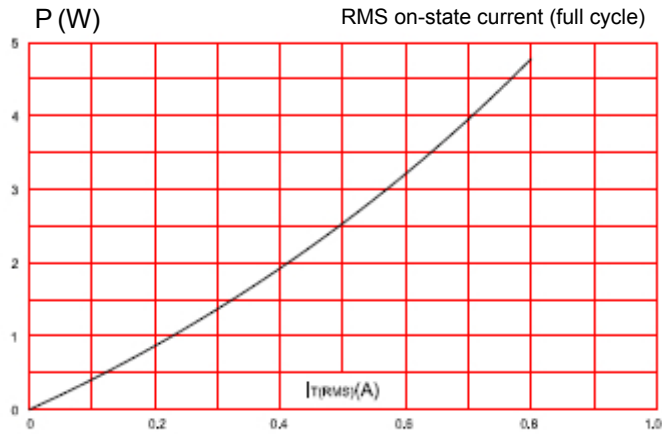


FIG.2: RMS on-state current versus case temperature (full cycle)

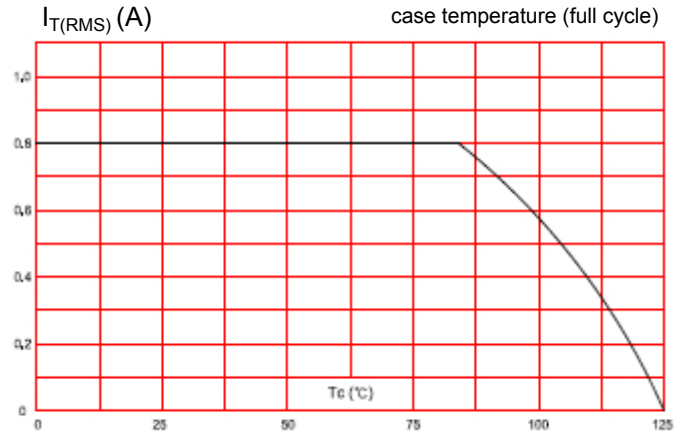


FIG.3: on-state characteristics (maximum values)

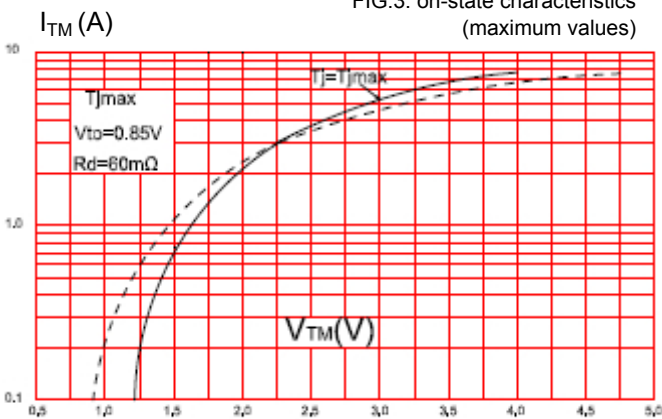


FIG.4: Surge peak on-state current versus number of cycles.

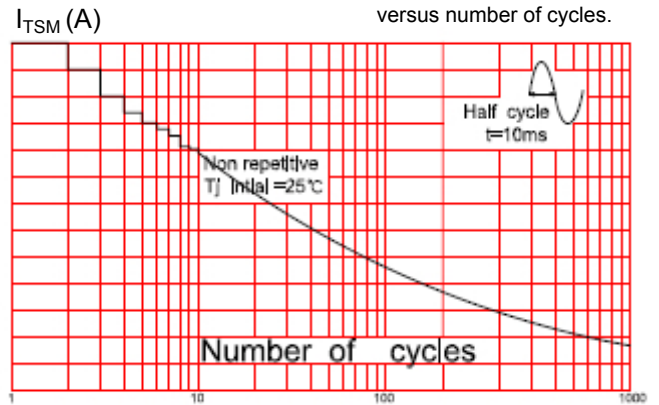


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10ms$.

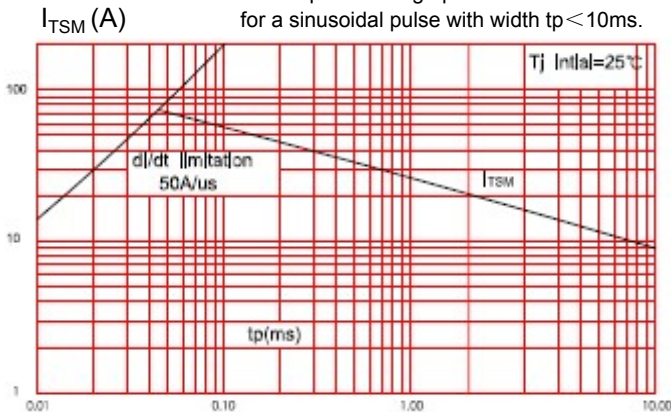
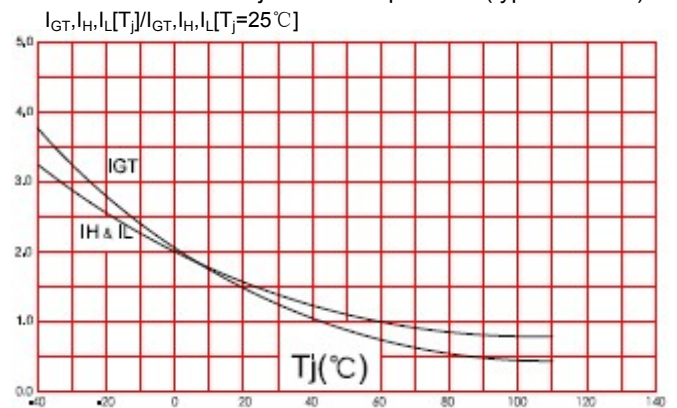
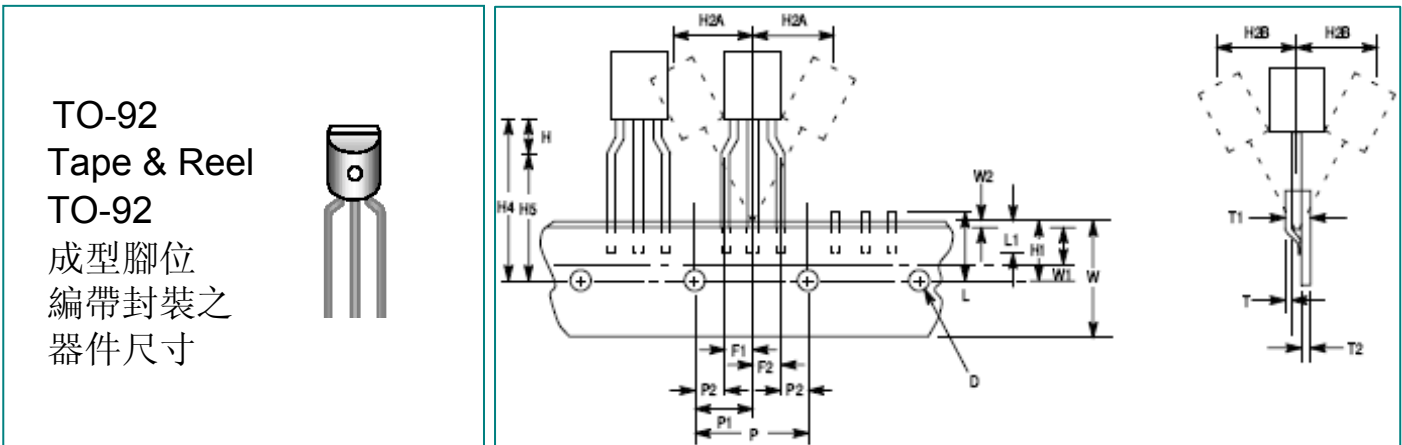
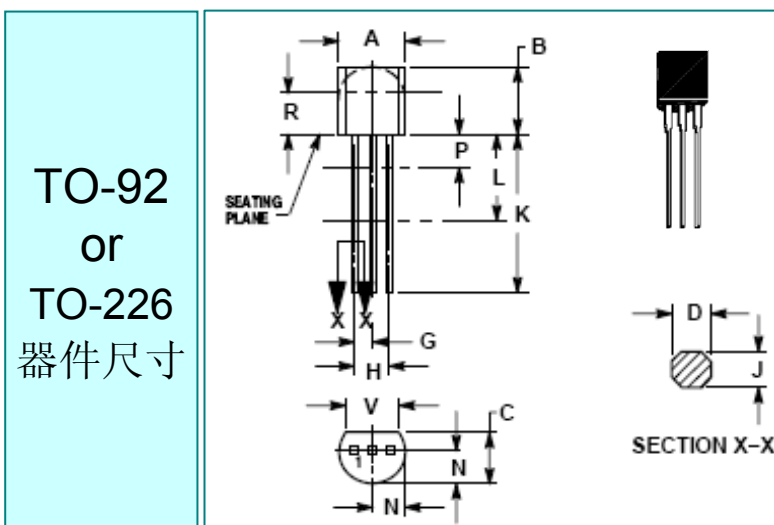


FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).





SYMBOL 符號表示	Item 項目詳述	Specification (規格尺寸說明)			
		Inches (英寸單位)		Millimeter (毫米單位)	
		Min (最小)	Max (最大)	Min (最小)	Max (最大)
D	Tape Feedhole Diameter	0.1496	0.1653	3.8	4.2
D2	Component Lead Thickness Dimension	0.015	0.020	0.380	0.510
F1, F2	Component Lead Pitch	0.945	0.11	2.4	2.8
H	Bottom of Component to Seating Plane	0.059	0.156	1.5	4
H1	Feedhole Location	0.3346	0.3741	8.5	9.5
H2A	Deflection Left or Right	0	0.039	0	1
H2B	Deflection Front or Rear	0	0.051	0	1
H4	Feedhole to Bottom of Component	0.7086	0.768	18	19.5
H5	Feedhole to Seating Plane	0.61	0.649	15.5	16.5
L	Defective Unit Clipped Dimension	0.3346	0.433	8.5	11
L1	Lead Wire Enclosure	0.09842	---	2.5	----
P	Feedhole Pitch	0.4921	0.5079	12.5	12.9
P1	Feedhole Center to Center Lead	0.2342	0.2658	5.95	6.75
P2	First Lead Spacing Dimension	0.1397	0.1556	3.55	3.95
T	Adhesive Tape Thickness	0.06	0.08	0.15	0.200
T1	Overall Taped Package Thickness	---	0.0567	---	1.440
T2	Carrier Strip Thickness	0.014	0.027	0.350	0.650
W	Carrier Strip Width	0.6889	0.7481	17.50	19.00
W1	Adhesive Tape Width	0.2165	0.2841	5.50	6.30
W2	Adhesive Tape Position	0.0059	0.01968	0.15	0.50



DIM	Specification (規格尺寸說明)			
	Inches (英寸單位)		Millimeter (毫米單位)	
	Min (最小)	Max (最大)	Min (最小)	Max (最大)
A	0.175	0.205	4.450	5.200
B	0.170	0.210	4.320	5.330
C	0.125	0.165	3.180	4.190
D	0.016	0.021	0.407	0.533
G	0.045	0.055	1.150	1.390
H	0.095	0.105	2.420	2.660
J	0.015	0.020	0.390	0.500
K	0.500	----	12.70	----
L	0.250	----	6.350	----
N	0.080	0.105	2.040	2.660
P	----	0.100	----	2.540
R	0.115	----	2.930	----
V	0.135	----	3.430	----



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