

UNISONIC TECHNOLOGIES CO., LTD

X0405 **SCR**

4A SCR

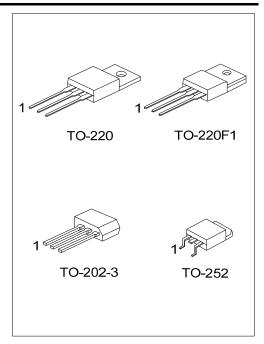
DESCRIPTION

The UTC X0405 is a 4A SCR, it uses UTC's advanced technology to provide customers with highly sensitive triggering levels, etc.

The UTC X0405 is suitable for all applications, such as motor control in kitchen aids, capacitive discharge ignitions, and overvoltage crowbar protection in low power supplies, etc.

FEATURES

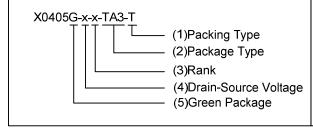
* Highly sensitive triggering levels



ORDERING INFORMATION

Ordering Number		Dookogo	Pin Assignment			Dooking	
Lead Free	Halogen Free	Package	1	2	3	Packing	
X0405L-x-x-TA3-T	X0405G-x-x-TA3-T	TO-220	K	Α	G	Tube	
X0405L-x-x-TF1-T	X0405G-x-x-TF1-T	TO-220F1	K	Α	G	Tube	
X0405L-x-x-TD3-T	X0405G-x-x-TD3-T	TO-202-3	K	Α	G	Tube	
X0405L-x-x-TN3-R	X0405G-x-x-TN3-R	TO-252	K	Α	G	Tape Reel	

Note: Pin Assignment: G: Gate A: Anode K: Cathode

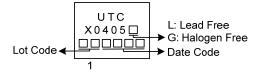


- (1) T: Tube, R: Tape Reel
- (2) TA3: TO-220, TF1: TO-220F1, TD3: TO-202-3

TN3: TO-252

- (3) x: Refer to CLASSIFICATION OF IGT
- (4) 6: 600V, 8: 800V
- (5) G: Halogen Free and Lead Free, L: Lead Free

MARKING



www.unisonic.com.tw 1 of 4

ABSOLUTE MAXIMUM RATINGS (limiting values)

PARAMETER		SYMBOL	RATINGS	UNIT
Denetitive Deak Off State Veltages	X0405-6	\/ \/	600	V
Repetitive Peak Off-State Voltages	X0405-8	V_{DRM}/V_{RRM}	800	V
RMS On-State Current (180° Conduction	T _I =60°C		4	Α
Angle)	T _A =25°C	I _{T(RMS)}	1.35	Α
Average On-State Current (180° Conduction	T _I =60°C	_	2.5	Α
Angle)	T _A =25°C	I _{T(AV)}	0.9	Α
Non-Boundaries Common Book On Otata Commont	t _P =8.3ms, T _J =25°C	_	33	Α
Non Repetitive Surge Peak On-State Current	t _P =10ms, T _J =25°C	I _{TSM}	30	Α
I ² t Value for Fusing	t _P =10ms, T _J =25°C	l ² t	4.5	A ² s
Critical Rate of Rise of On-State Current I _G =2xI _{GT} ,tr≤100ns	F=60Hz, T _J =125°C	dl/dt	50	A/µs
Peak Gate Current	t _P =20µs, T _J =125°C	I _{GM}	1.2	Α
Average Gate Power Dissipation	T _J =125°C	$P_{G(AV)}$	0.2	W
Operating Junction Temperature	TJ	-40 ~ +125	°C	
Storage Junction Temperature		T _{STG}	-40 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL RESISTANCES CHARACTERISTICS

PARAMETER		SYMBOL	RATINGS	UNIT
	TO-220 TO-220F1	0	60	°C/W
Junction to Ambient (DC)	TO-202-3	θ _{JA}	100	°C/W
	TO-252		75	°C/W
Junction to Case (DC)	TO-220	θ _{JC}	2	°C/W
	TO-220F1		4	°C/W
	TO-202-3		15	°C/W
	TO-252		3	°C/W

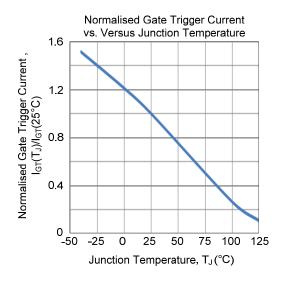
■ ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise specified)

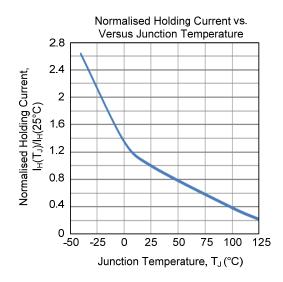
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Trigger Current	I_{GT}	V _D =12V, R _L =140Ω			200	μA
Gate Trigger Voltage	V_{GT}				0.8	V
Gate Non-Trigger Voltage	V_{GD}	$V_D = V_{DRM}$, $R_L = 3.3 k\Omega$, $R_{GK} = 1 k\Omega$, $T_J = 125$ °C	0.1			V
Repetitive Gate Voltage	V_{RG}	I _{RG} =10µA	8			V
Holding Current	I_{H}	I_T =50mA, R_{GK} =1k Ω			5	mA
Latching Current	IL	$I_G=1$ mA, $R_{GK}=1$ k Ω	6			mA
Critical Rate of Rise of Off-State Voltage	dV/dt	V_D =67% V_{DRM} , R_{GK} =1k Ω , T_J =110°C	15			V/µs
Peak On-State Voltage	V_{TM}	I _{TM} =8A, t _p =380μs, T _J =25°C			1.8	V
Threshold Voltage	V_{TO}	T _J =125°C			0.95	V
Dynamic Resistance	R_D	T _J =125°C			100	mΩ
Depotitive Dook Off State Comment	I_{DRM}	$V_{DRM}=V_{RRM}$, $R_{GK}=1k\Omega$, $T_{J}=25^{\circ}C$			5	μΑ
Repetitive Peak Off-State Current	I_{RRM}	$V_{DRM}=V_{RRM}$, $R_{GK}=1k\Omega$, $T_{J}=125^{\circ}C$			1	mA

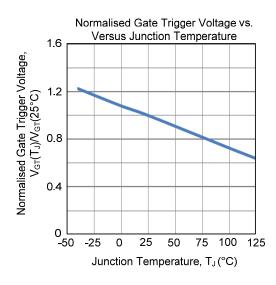
CLASSIFICATION OF I_{GT}

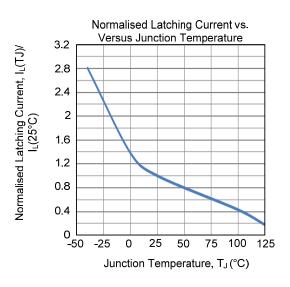
RANK	Α	В
RANGE	< 200 µA	20 ~ 50 μA

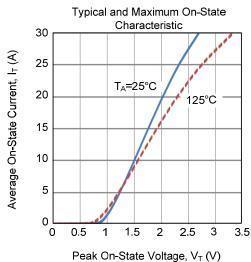
TYPICAL CHARACTERISTICS

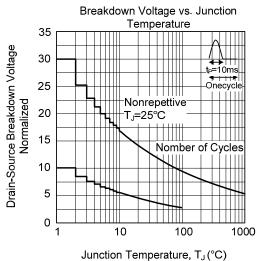












X0405 SCR

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