



Z00607

Preliminary

TRIAC

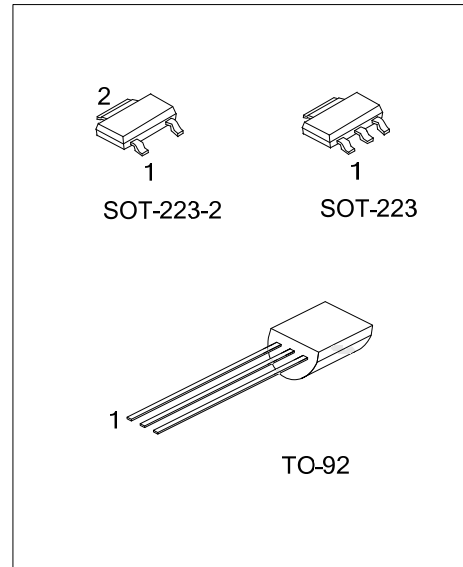
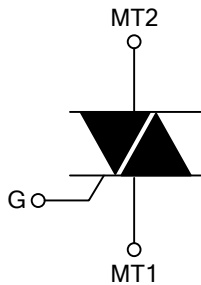
0.8A TRIAC

■ DESCRIPTION

The UTC **Z00607** is a 0.8A triac, it uses UTC's advanced technology to provide customers with low gate trigger current.

The UTC **Z00607** is suitable for low power AC switching applications and driving microcontrollers.

■ SYMBOL



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	Z00607G-AA2-R	SOT-223-2	MT1	MT2	GATE	Tape Reel
-	Z00607G-AA3-R	SOT-223	MT1	MT2	GATE	Tape Reel
Z00607L-T92-B	Z00607G-T92-B	TO-92	MT1	GATE	MT2	Tape Box
Z00607L-T92-K	Z00607G-T92-K	TO-92	MT1	GATE	MT2	Bulk

<p>Z00607G-AA2-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel, B: Tape Box, K: Bulk (2) AA2: SOT-223-2, AA3: SOT-223, T92: TO-92 (3) L: Lead Free, G: Halogen Free and Lead Free
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■ MARKING

SOT-223-2 / SOT-223	TO-92

■ ABSOLUTE MAXIMUM RATINGS

PARAMETER			SYMBOL	RATINGS	UNIT	
Repetitive Peak Off-State Voltage			V_{DRM}	600	V	
RMS On-State Current (Full Sine Wave)		$T_{MB}=50^{\circ}C$	$I_{T(RMS)}$	0.8	A	
Non Repetitive Surge Peak On-State Current (Full Cycle, T_J initial= $25^{\circ}C$)	F=50Hz	t=20ms	I_{TSM}	9	A	
	F=60Hz	t=16.7ms		9.5		
I^2t Value for Fusing		t _p =10ms	I^2_t	0.45	A ² s	
Critical Rate of Rise of On-State Current $I_G=2 \times I_{GT}$, t _r ≤100ns		F=120Hz	$T_J=110^{\circ}C$	dI/dt	20	A/μs
Peak Gate Current		t _p =20μs	$T_J=110^{\circ}C$	I_{GM}	1	A
Average Gate Power Dissipation		$T_J=110^{\circ}C$	$P_{G(AV)}$	0.1	W	
Operating Junction Temperature Range			T_J	-40 ~ +110	°C	
Storage Junction Temperature Range			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 DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Lead (AC)	SOT-223-2	θ_{JLEAD}	25	°C/W
	SOT-223			
	TO-92		60	
Junction to Ambient	SOT-223-2	θ_{JA}	60	°C/W
	SOT-223			
	TO-92		150	

■ ELECTRICAL CHARACTERISTICS ($T_J=25^{\circ}C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Trigger Current (Note 1)	I_{GT}	$V_D=12V, R_L=30\Omega$	I-II-III		5	mA
			IV		7	
Gate Trigger Voltage	V_{GT}	ALL			1.3	V
Gate Non-Trigger Voltage	V_{GD}	$V_D=V_{DRM}, R_L=3.3K\Omega, T_J=110^{\circ}C$	ALL	0.2		V
Holding Current (Note 2)	I_H	$I_T=200mA$			5	mA
Latching Current	I_L	$I_G=1.2I_{GT}$	I-III-IV		10	mA
			II		20	
Critical Rate of Rise of Off-State Voltage (Note 2)	dV/dt	$V_D=67\%V_{DRM}$, Gate Open, $T_J=110^{\circ}C$	10			V/μs
Critical Rate of Rise of Off-State Voltage at Commutation (Note 2)	(dV/dt) _c	(dV/dt) _c =0.35A/ms, $T_J=110^{\circ}C$	1.5			V/μs
Peak On-State Voltage (Note 2)	V_{TM}	$I_{TM}=1.1A, t_p=380\mu s$	$T_J=25^{\circ}C$		1.5	V
Threshold Voltage (Note 2)	V_{TO}		$T_J=110^{\circ}C$		0.95	V
Dynamic Resistance (Note 2)	R_D		$T_J=110^{\circ}C$		420	mΩ
Repetitive Peak Off-State Current	I_{DRM}	$V_{DRM}=V_{RRM}=600V$	$T_J=25^{\circ}C$		5	μA
	I_{RRM}		$T_J=110^{\circ}C$		0.1	mA

Notes: 1. Minimum I_{GT} is guaranteed at 5% of I_{GT} max.

2. For both polarities of MT2 referenced to MT1.

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