



Z00607

Preliminary

TRIAC

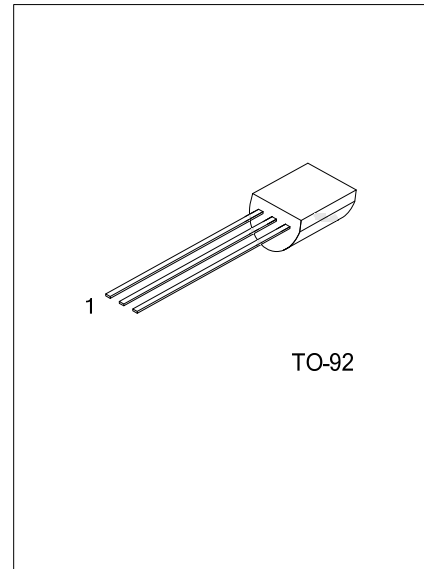
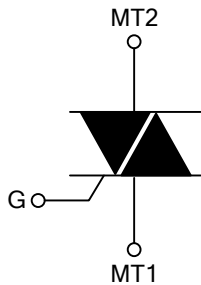
0.8A TRIAC

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

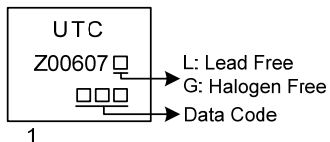


ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
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>Z00607L-T92-B</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) L: Lead Free, G: Halogen Free and Lead Free</p>
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MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER			SYMBOL	RATINGS	UNIT
Repetitive Peak Off-State Voltage			V_{DRM}	600	V
RMS On-State Current (Full Sine Wave)	$T_{MB}=50^{\circ}\text{C}$		$I_{T(RMS)}$	0.8	A
Non Repetitive Surge Peak On-State Current (Full Cycle, T_J initial= 25°C)	F=50Hz	t=20ms	I_{TSM}	9	A
	F=60Hz	t=16.7ms		9.5	
I^2t Value for Fusing	$t_p=10\text{ms}$		I^2_t	0.45	A^2s
Critical Rate of Rise of On-State Current $I_G=2 \times I_{GT}$, $t_r \leq 100\text{ns}$	F=120Hz	$T_J=110^{\circ}\text{C}$	dI/dt	20	$\text{A}/\mu\text{s}$
Peak Gate Current	$t_p=20\mu\text{s}$	$T_J=110^{\circ}\text{C}$	I_{GM}	1	A
Average Gate Power Dissipation	$T_J=110^{\circ}\text{C}$		$P_{G(AV)}$	0.1	W
Operating Junction Temperature Range			T_J	-40~+110	$^{\circ}\text{C}$
Storage Junction Temperature Range			T_{STG}	-40~+150	$^{\circ}\text{C}$

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)	θ_{LEAD}	60	$^{\circ}\text{C}/\text{W}$
Junction to Ambient	θ_{JA}	150	$^{\circ}\text{C}/\text{W}$

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

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