UT20005CT THRU UT2008CT

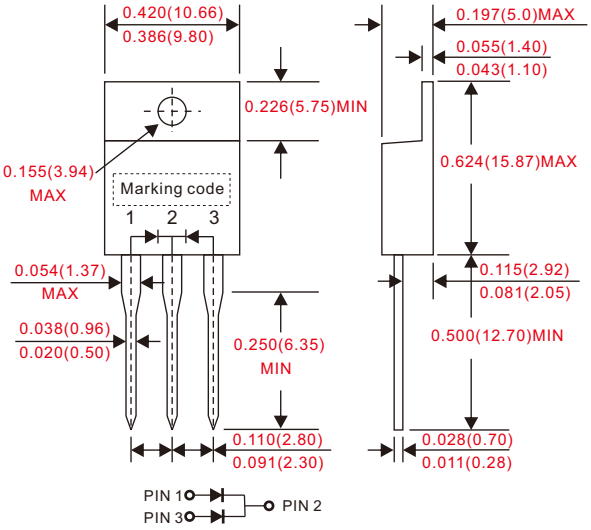
20A High Power Ultra Fast Rectifiers

■ Features

- Dual rectifier construction, positive centetap, offer 10A half wave and 20A full wave rectification.
- Low power loss, high efficiency.
- High surge current capability.
- Ultra fast recovery time for switching mode application.
- Low power loss.
- Glass passivated chip junctions.
- Suffix "G" indicates Halogen free parts, ex. UT20005CTG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Outline

TO-220AB



Dimensions in inches and (millimeters)

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : JEDEC TO-220AB molded plastic body.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: As marked.
- Mounting Position : Any.
- Weight : Approximated 2.25 gram.

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		I_O			20	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			150	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25°C$	I_R			5.0	uA
	$V_R = V_{RRM}$ $T_A = 125°C$				100	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		200		pF
Storage temperature		T_{STG}	-55		+150	°C

Symbol	Marking code	Max. repetitive peak reverse voltage V_{RRM} (V)	Max. RMS voltage V_{RMS} (V)	Max. DC blocking voltage V_R (V)	Max. forward voltage @10A, $T_A = 25°C$ V_F (V)	Max. reverse recovery time(1) T_{rr} (ns)	Operating temperature T_J (°C)
UT20005CT	UT20005CT	50	35	50	1.0	50	-55 ~ +150
UT2001CT	UT2001CT	100	70	100			
UT2002CT	UT2002CT	200	140	200			
UT2004CT	UT2004CT	400	280	400	1.40		
UT2006CT	UT2006CT	600	420	600	1.70	75	
UT2008CT	UT2008CT	800	560	800			

Note : 1. $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$

Document ID : DS-11H18
Revised Date : 2014/02/05
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■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

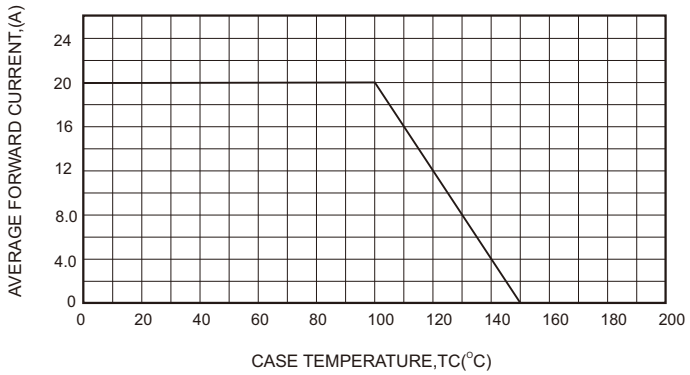


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

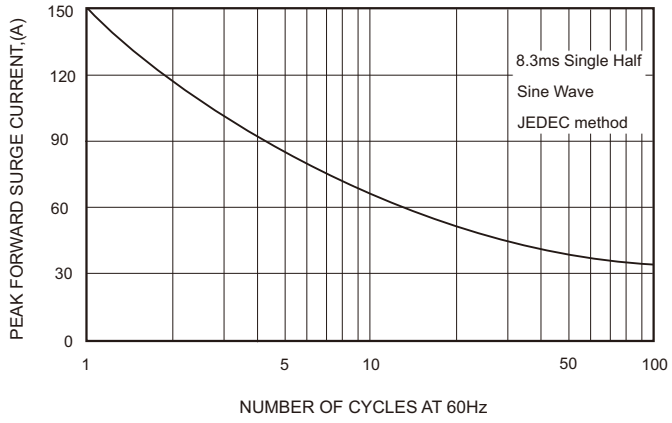


FIG.3-TYPICAL FORWARD CHARACTERISTICS

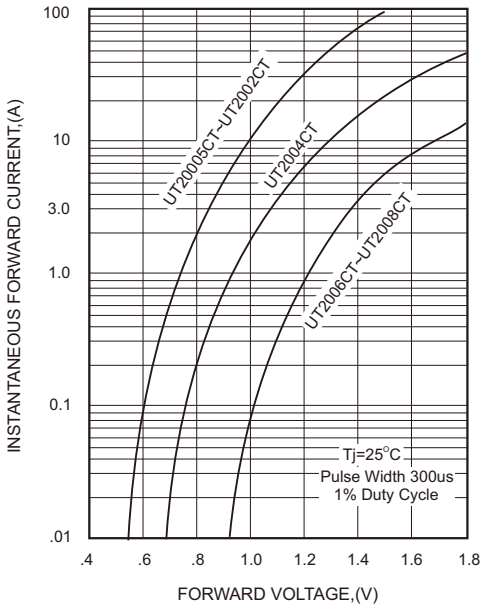


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

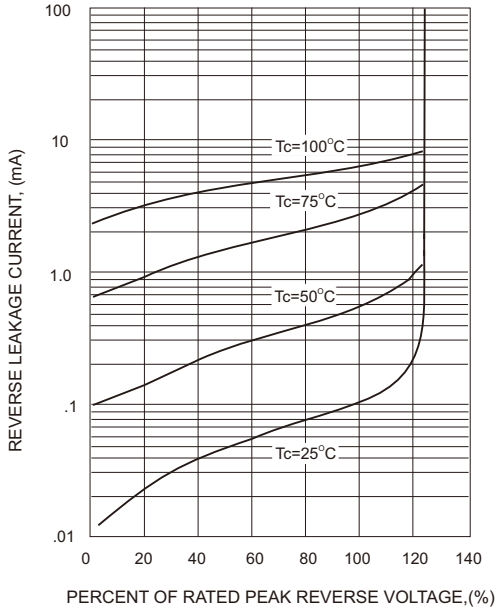
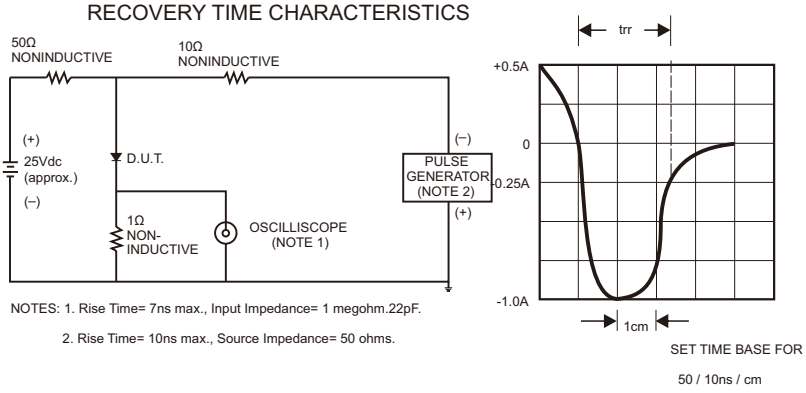


FIG.5- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

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