

RECTIFIERS

Standard Recovery, 7.5 Amp to 12 Amp

UT5105-UT5160
UT6105-UT6160
UT8105-UT8160
UT5105HR-UT5160HR
UT6105HR-UT6160HR
UT8105HR-UT8160HR

FEATURES

- Rating: 12A
- Controlled Avalanche
- Miniature Package
- Surge Rating: 200A

DESCRIPTION

These series of high current rectifiers offers opportunity for size and weight reduction in high power supplies.

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ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage	12 Amp Series	9 Amp Series	7.5 Amp Series
50V	UT8105/8105HR	UT6105/6105HR	UT5105/5105HR
100V	UT8110/8110HR	UT6110/6110HR	UT5110/5110HR
200V	UT8120/8120HR	UT6120/6120HR	UT5120/5120HR
400V	UT8140/8140HR	UT6140/6140HR	UT5140/5140HR
600V	UT8160/8160HR	UT6160/6160HR	UT5160/5160HR

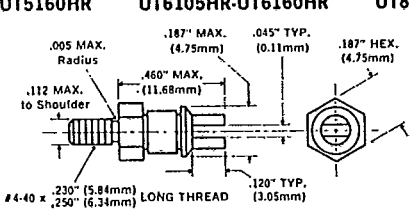
	12 AMP SERIES	9 AMP SERIES	7.5 AMP SERIES
Maximum Average D.C. Output Current @ $T_C = 100^\circ\text{C}$	12.0A	9.0A	7.5A
Non-Repetitive Sinusoidal Surge Current (8.3ms)	200A	175A	150A
Operating and Storage Temperature Range	-65°C to $+175^\circ\text{C}$		
Thermal Resistance, Junction to Case	7.5°C/Watt		
Current Derating	See current vs. case temperature curve		

MECHANICAL SPECIFICATIONS

UT5105-UT5160
UT5105HR-UT5160HR

UT6105-UT6160
UT6105HR-UT6160HR

UT8105-UT8160
UT8105HR-UT8160HR



Part Identification: Numerals and polarity letter indicate UTR type number, e.g., UTR 4405.
Polarity: Cathode to Stud is standard. Reverse polarity denoted by "R" suffix.
Finish: Metal parts gold plated per MIL-G-45204, Type II.
Weight: 1.5 grams, typical.
Also available with insulated stud. Reference Design Note 17.
Installation
Maximum unlubricated stud torque: 28 inch-ounces.
Mounting hardware supplied.
Do not use a screwdriver in the turret slot for installation purposes, or damage may result.

BODY C — Stud Mount



9347963 UNITRODE CORP.

UT5105-UT5160
UT5105HR-UT5160HR

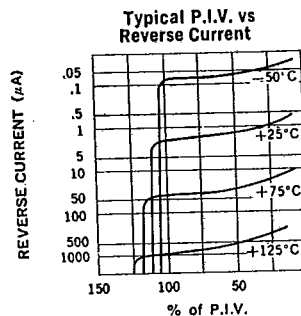
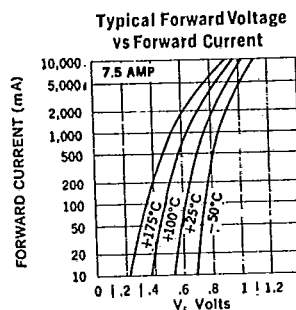
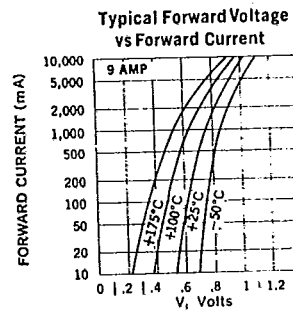
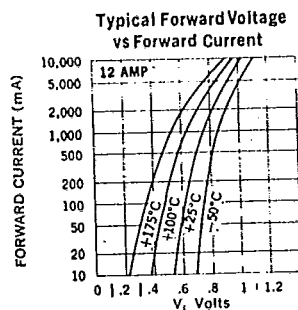
UT6105-UT6160
UT6105HR-UT6160HR

UT8105-UT8160
UT8105HR-UT8160HR

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ELECTRICAL SPECIFICATIONS (at 25°C unless noted)

Type	Peak Inverse Voltage	Maximum Forward Voltage	Max. Reverse Current at PIV	
			25°C	100°C
UT8105/8105HR UT8110/8110HR UT8120/8120HR UT8140/8140HR UT8160/8160HR	50V 100V 200V 400V 600V	1V @ 8A	10 μ A	300 μ A
UT6105/6105HR UT6110/6110HR UT6120/6120HR UT6140/8140HR UT6160/8160HR	50V 100V 200V 400V 600V	1V @ 6A	10 μ A	300 μ A
UT5105/5105HR UT5110/5110HR UT5120/5120HR UT5140/5140HR UT5160/5160HR	50V 100V 200V 400V 600V	1V @ 5A	10 μ A	300 μ A



OPTIONAL HIGH RELIABILITY (HR) SCREENING

The following tests are performed on 100% of the devices specified UT5105HR through UT8160HR.

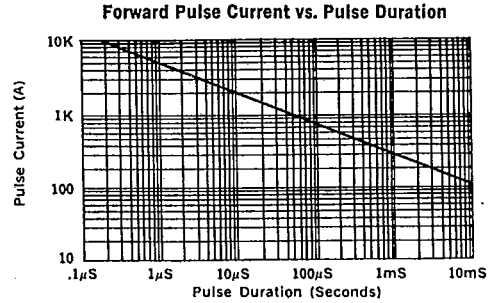
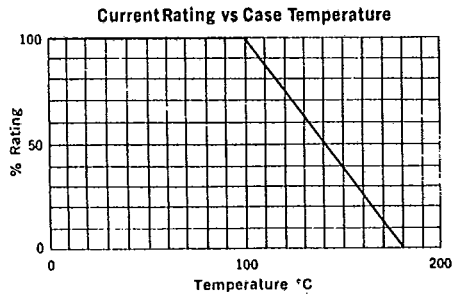
SCREEN	MIL-STD-750 METHOD	CONDITIONS
1. High Temperature Life (Stabilization Bake)	1032	24 Hours @ T _A = 175°C
2. Thermal Shock (Temperature Cycling)	1051	10 Cycles @ T _A = (-55°C to +150°C)
3. Interim Electrical Parameters	—	V _F and I _R @ 25°C
4. Power Burn-In	1038	96 Hours @ T _C = 100°C, I _O = 50% Rated V _R = Rated
5. Final Electrical and Delta Parameters	Go/No Go	ΔI _R ± 100% or 1 μ A (whichever is greater) ΔV _F ± 2%

UT5105-UT5160
UT5105HR-UT5160HR

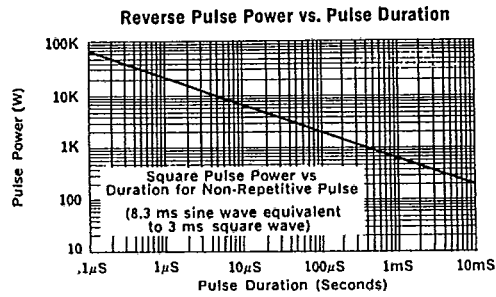
UT6105-UT6160
UT6105HR-UT6160HR

UT8105-UT8160
UT8105HR-UT8160HR

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MECHANICAL SPECIFICATIONS

