RECTIFIERS
High Efficiency, 45A Centertap, 50 - 150V

UES4505C
UES4510C
UES4515C

FEATURES
- Low Forward Voltage
- Fast Recovery Times
- Economical Convenient TO-3P Package
- Low Thermal Resistance
- Mechanically Rugged
- PIV up to 150V

DESCRIPTION
The UES4505C Series, in the economical, convenient TO-3P package, is specifically designed for operation in power switching circuits to frequencies in excess of 100kHz. The very low forward voltage and very fast recovery time make them particularly suited for switching type power supplies.

ABSOLUTE MAXIMUM RATINGS, either leg unless noted

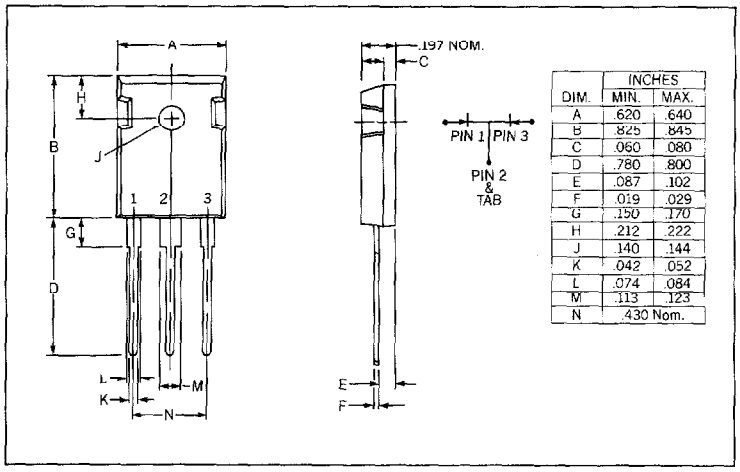
		UES4505C	UES4510C	UES4515C
Peak Inverse Voltage	V_R, V_{RWM}, V_{RRM}	50V	100V	150V
Maximum Average D.C. Output Current @ T_C = 125°C, full wave operation (see curves)	$I_{F(AV)}$	45A		
Non-Repetitive Sinusoidal Surge Current, 8.3mS	I_{FSM}	450A		
Thermal Resistance Junction to Case	$R_{\theta J-C}$	0.8°C/W		
Thermal Resistance Junction to Case both legs together, full wave	$R_{\theta J-C}$	0.6°C/W		
Thermal Resistance Junction to Ambient either leg, or both legs together	$R_{\theta J-A}$	40°C/W		
Operating and Storage Temperature Range	T_{OP}, T_{STG}	-55°C to +150°C		

ELECTRICAL SPECIFICATIONS

Type	PIV	Maximum Forward Voltage (V_F)		Maximum Reverse Current (I_R) @ PIV		Maximum Reverse Recovery Time*	*Typical* Forward Recovery Voltage @ 1A t_r = 14ns
		T_J = 25°C	T_J = 125°C	T_J = 25°C	T_J = 125°C		
UES4505C	50V	1.1 @ 45A	1.0 @ 45A	20μA	10mA	50ns	2.0V
UES4510C	100V	1.0 @ 22.5A	.88 @ 22.5A				
UES4515C	150V						

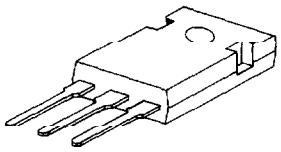
* Measured in circuit I_F = 0.50A, I_{RM} = 1.0A, I_{REC} = 0.25A.

MECHANICAL SPECIFICATIONS



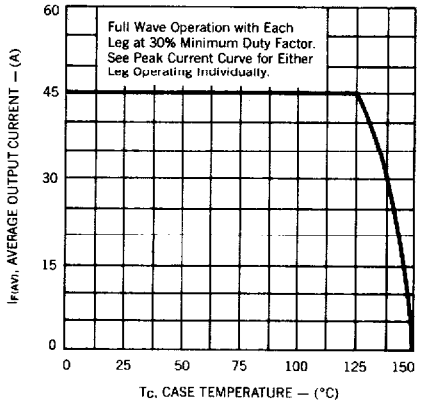
DIM.	INCHES MIN.	INCHES MAX.
A	.620	.640
B	.825	.845
C	.060	.080
D	.780	.800
E	.087	.102
F	.019	.029
G	.150	.170
H	.212	.222
J	.140	.144
K	.042	.052
L	.074	.084
M	.113	.123
N	.430 Nom.	

TO-3P

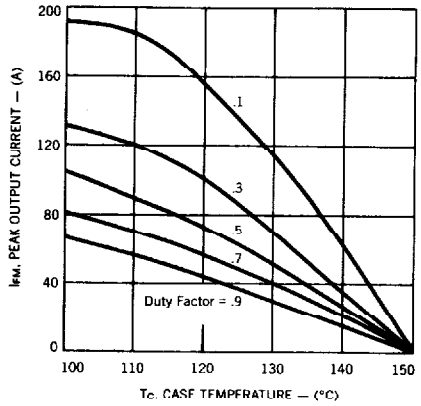


Microsemi Corp.
Watertown
The diode experts

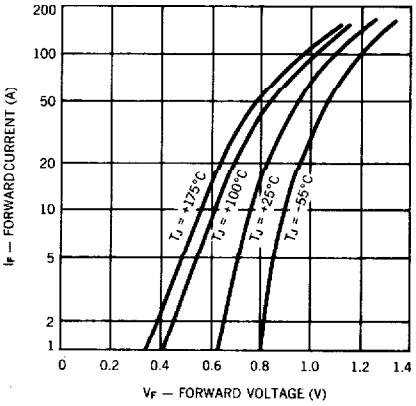
Average Output Current vs Case Temperature



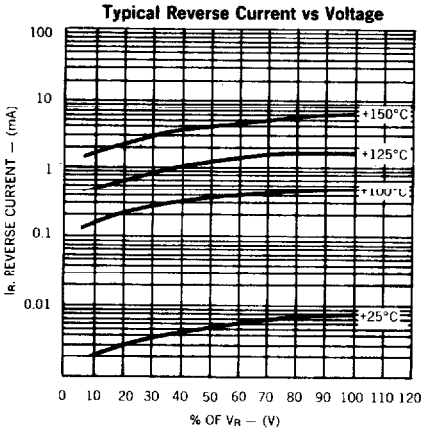
Peak Output Current vs Case Temperature (Either Leg)



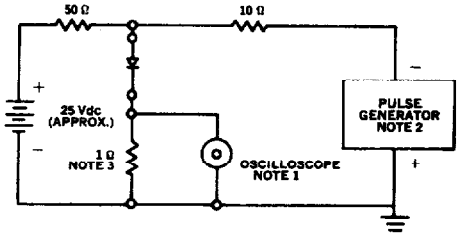
Forward Current vs Forward Voltage



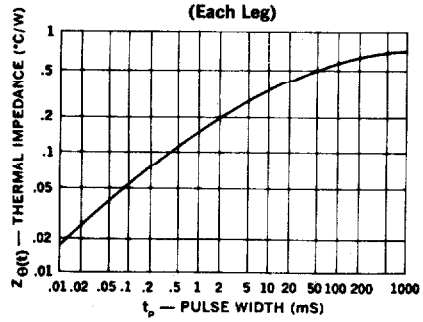
Typical Reverse Current vs Voltage



Reverse-Recovery Circuit



Thermal Impedance vs Pulse Width (Each Leg)



NOTES:
1. Oscilloscope: Rise time ⩽ 3ns; input impedance = 50Ω.
2. Pulse Generator: Rise time ⩽ 8ns; source impedance 10Ω.
3. Current viewing resistor, non-inductive, coaxial recommended.

580 PLEASANT STREET • WATERTOWN, MA 02172
TEL. (617) 926-0404 • FAX (617) 924-1235

PRINTED IN U.S.A.