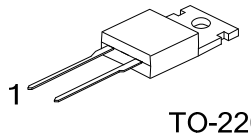
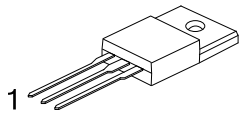
DSE804 **Preliminary** ***FAST RECOVERY EPITAXIAL DIODE***

SUPERFAST RECOVERY RECTIFIER



TO-220-2



TO-220F

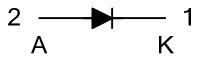
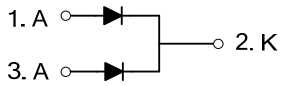
■ DESCRIPTION

The UTC **DSE804** is a superfast recovery rectifier, it uses UTC's advanced technology to provide customers with low forward voltage drop, low leakage, high current capability and high surge capability, etc.

■ FEATURES

* Low forward voltage drop
* low leakage
* High current capability
* High surge capacity
* Super fast recovery times-epitaxial construction

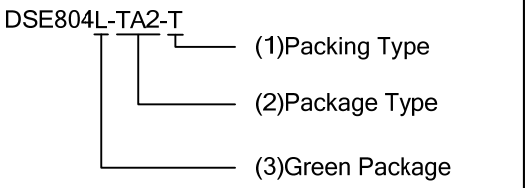
■ SYMBOL

TO-220-2	TO-220F
	

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
DSE804L-TA2-T	DSE804G-TA2-T	TO-220-2	K	A	-	Tube
DSE804L-TF3-T	DSE804G-TF3-T	TO-220F	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

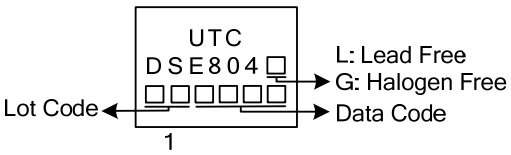


(1) T: Tube

(2) TA2: TO-220-2, TF3: TO-220F

(3) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz

PARAMETER	SYMBOL	RATINGS	UNIT
DC Blocking Voltage	V_R	400	V
RMS Voltage	V_{RMS}	280	V
Recurrent Peak Reverse Voltage	V_{RRM}	400	V
Average Average Forward Current at T_C=75°C	$I_{F(AV)}$	8	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	125	A
Operating Junction Temperature	T_J	-55~+150	°C
Storage Temperature	T_{STG}	-55~+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 Ambient		θ_{JA}	62.5	°C/W
Junction to Case	TO-220-2	θ_{JC}	3	°C/W
	TO-220F		5	°C/W

Note: Mounted on P.C. Board with 14mm^2 (.013mm thick) copper pad areas

■ ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage (Note 1)	V_F	I_F=8A			1.3	V
DC Reverse Current at Rated DC Blocking Voltage	I_R	T_J=25°C			1	μA
		T_J=100°C			300	μA
Reverse Recovery Time (Note 2)	t_{rr}				50	ns
Junction Capacitance (Note 3)	C_J			65		pF

Notes: 1. Pulse Test : Pulse width≤300μs, Duty cycle ≤ 2%
2. Reverse Recovery Tset Conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC