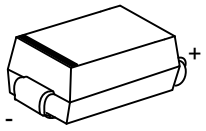
ES3J

DIODE

SURFACE MOUNT SUPER FAST RECTIFIER



SMC
(JEDEC DO-214AB)

■ DESCRIPTION

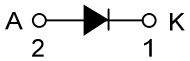
The UTC **ES3J** is a surface mount super fast rectifier, it uses UTC's advanced technology to provide customers with high forward surge current and low reverse leakage, etc.

The UTC **ES3J** is suitable for surface mounted applications.

■ FEATURES

* Low reverse leakage
* High forward surge current capability

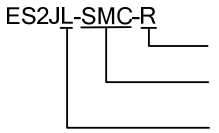
■ SYMBOL



■ ORDERING INFORMATION

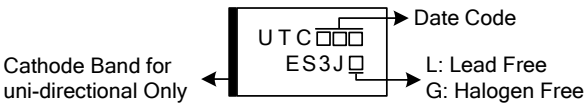
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
ES3JL-SMC-R	ES3JG-SMC-R	SMC	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode



(1) R: Tape Reel
(2) SMC: SMC
(3) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS

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

PARAMETER	SYMBOL	RATINGS	UNIT
Working Peak Reverse Voltage	V_{RWM}	600	V
Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Reverse Voltage	V_{RMS}	420	V
DC Blocking Voltage	V_R	600	V
Average Rectified Output Current (T_A=55°C)	I_O	3.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	100	A
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 (Note 2	θ_{JA}	40	°C/W

■ ELECTRICAL CHARACTERISTICS

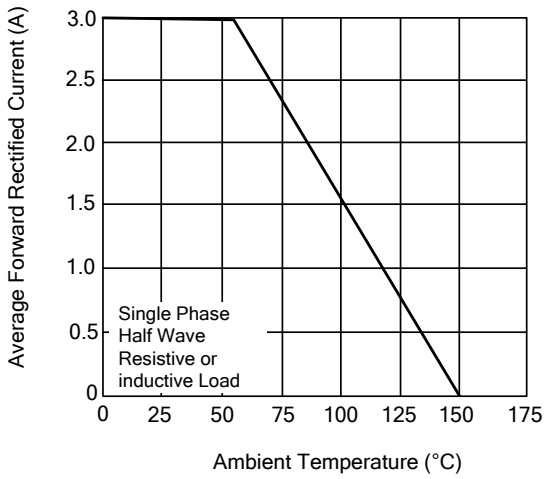
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage	V_{FM}	I_F=2.0A			1.5	V
DC Reverse Current at Rated DC Blocking Voltage	I_{RM}	T_A=25°C			5	μA
		T_A=100°C			50	μA
Reverse Recovery Time (Note 1)	t_{rr}				50	ns

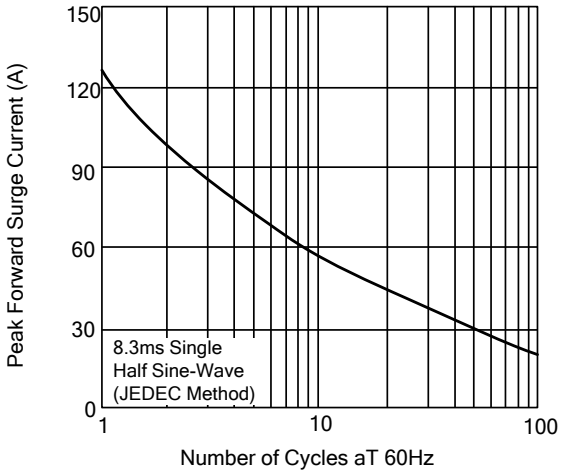
Notes: 1. Reverse recovery condition I_F=0.5A, I_R=1.0A, I_{rr}=0.25A.
2. P.C.B. mounted with 0.2×0.2” (5.0×5.0mm) copper pad areas.

■ TYPICAL CHARACTERISTICS

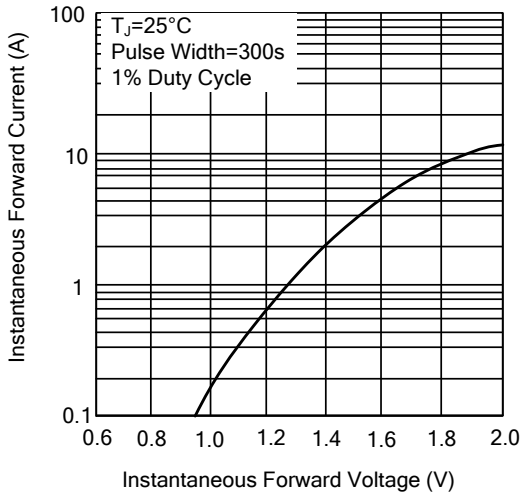
Forward Current Derating Curve



Maximum Non-Repetitive Peak Forward Surge Current



Typical Instantaneous Forward Characteristics



Typical Junction Capacitance