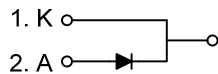


**UCBD0665****SiC-SBD DIODE****SILICON CARBIDE SCHOTTKY
BARRIER DIODES****DESCRIPTION**

The **UCBD0665** is an SiC Schottky barrier diodes (SBDs) feature high reverse voltage ratings. In addition to SBDs with short reverse recovery time (t_{rr}), provides 650V SBDs with a junction barrier Schottky (JBS) structure that provide low leakage current (I_r) and high surge current capability required for switched-mode power supplies. These devices help improve the efficiency of switched-mode power supplies.

FEATURES

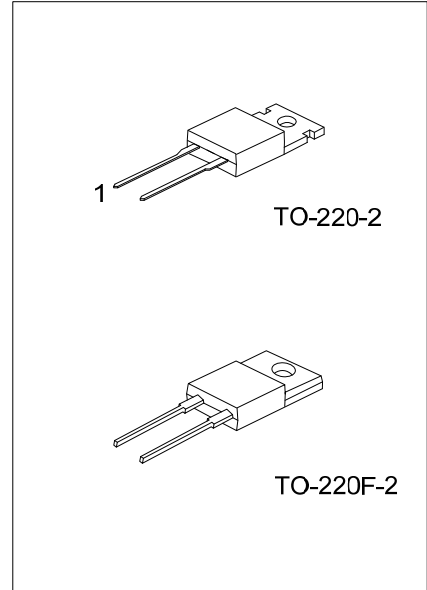
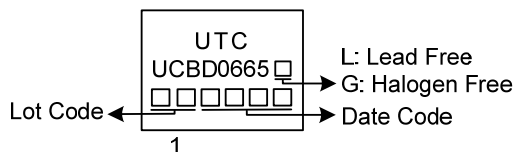
- * Negligible reverse recovery
- * High-Frequency Operation
- * Positive Temperature Coefficient
- * Temperature-Independent Switching

SYMBOL**ORDERING INFORMATION**

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
UCBD0665L-TA2-T	UCBD0665G-TA2-T	TO-220-2	K	A	Tube
UCBD0665L-TF32-T	UCBD0665G-TF32-T	TO-220F-2	K	A	Tube

Note: Pin Assignment: K: Cathode A: Anode

UCBD0665G-TA2-T	(1)Packing Type	(1) T: Tube
	(2)Package Type	(2) TA2: TO-220-2, TF32: TO-220F-2
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING

■ ABSOLUTE MAXIMUM RATINGS (T_C=25°C, unless otherwise specified)

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

PARAMETER		SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage		V _{RRM}	650	V
Surge Peak Reverse Voltage		V _{RSM}	650	V
Continuous Forward Current	T _C =25°C	I _F	20	A
	T _C =135°C		9	A
	T _C =153°C		6	A
Repetitive Peak Forward Surge Current	t _p =10ms, Half Sine Wave	I _{FRM}	60	A
Non-Repetitive Peak Forward Surge Current		I _{FSM}	66	A
Power Dissipation	TO-220-2	P _D	87	W
	TO-220F-2		40	W
Operating Junction Temperature		T _J	+150	°C
Storage Temperature Range		T _{STG}	-65 ~ +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

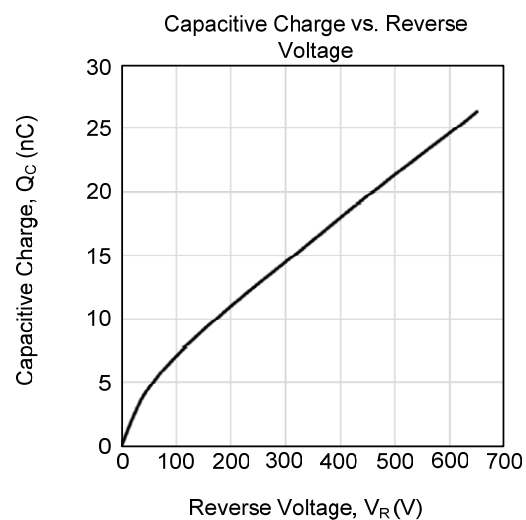
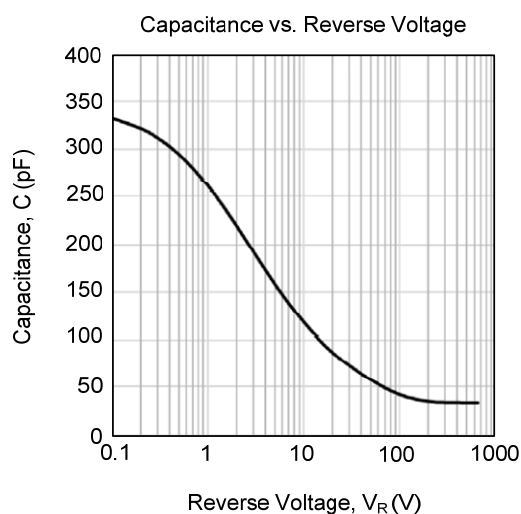
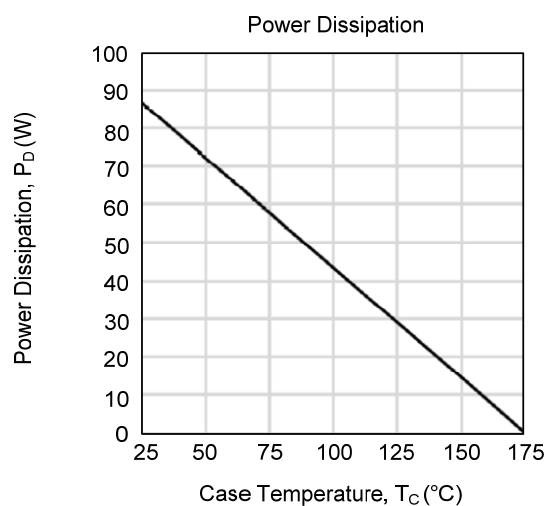
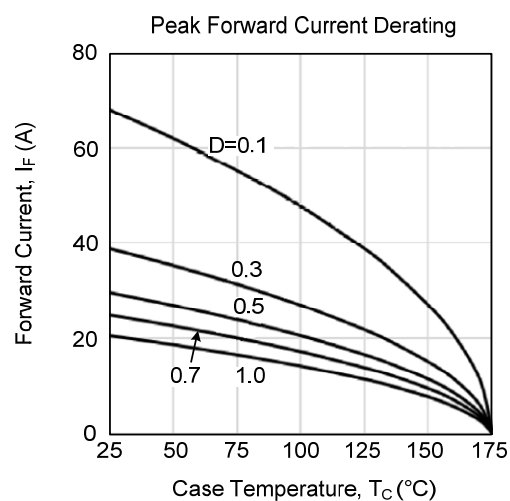
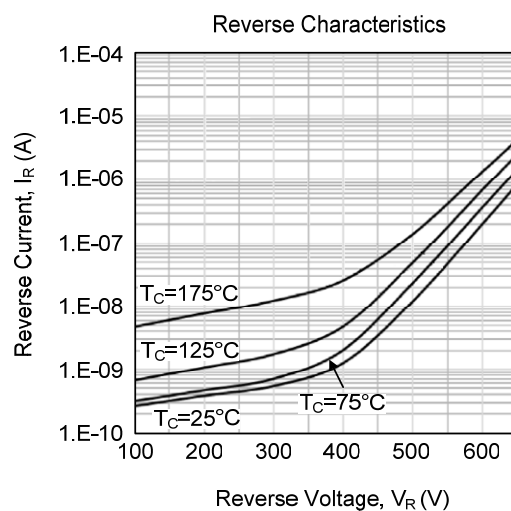
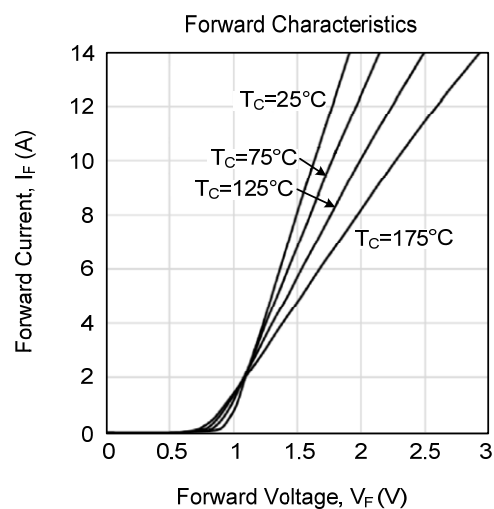
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Case	TO-220-2	θ _{JC}	1.7	°C/W
	TO-220F-2		3.125	°C/W

■ ELECTRICAL CHARACTERISTICS

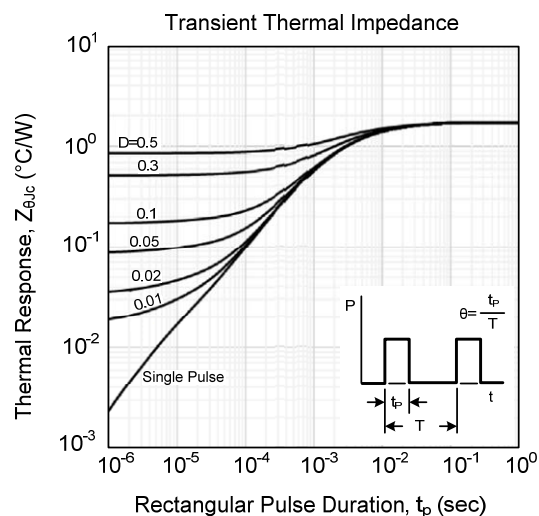
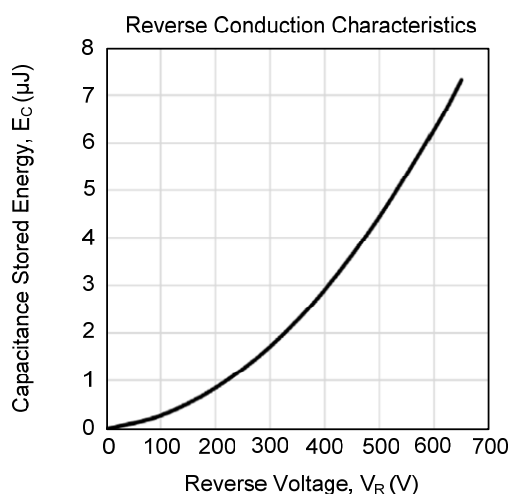
(Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
DC Blocking Voltage	V _{DC}	T _C =25°C	650			V
Forward Voltage	V _F	I _F =3.0A, T _C =25°C		1.16		V
		I _F =6.0A, T _C =25°C		1.34	1.5	V
		I _F =6.0A, T _C =175°C		1.66		V
Reverse Current	I _R	V _R =650V, T _C =25°C		1.2	50	μA
		V _R =650V, T _C =175°C		4.5		μA
Total Capacitive Charge	Q _C	V _R =400V		18		nC
Total Capacitance	C	V _R =1.0V, T _C =25°C, f=1MHz		261		pF
		V _R =200V, T _C =25°C, f=1MHz		35		pF
		V _R =400V, T _C =25°C, f=1MHz		33		pF
Capacitance Stored Energy	E _C	V _R =400V		2.9		μJ

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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