

### ■ Features

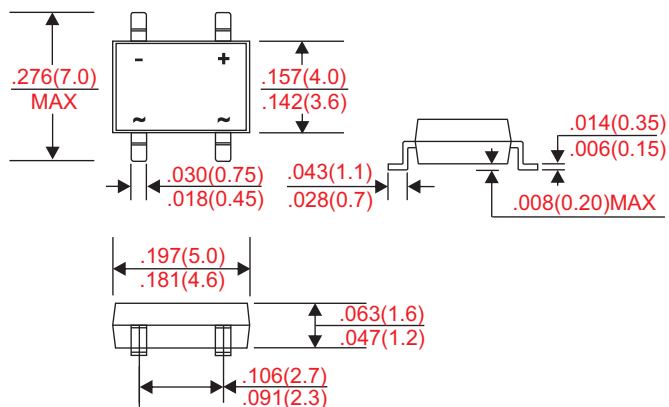
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Suffix "G" indicates Halogen-free part, ex. BTK22SG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, BTS
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body

### ■ Outline

BTS



Dimensions in inches and (millimeters)

### ■ Maximum ratings and electrical characteristics

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

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	$I_O$			2.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			50	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				20	
Thermal resistance	junction to ambient	$R_{BJA}$		95		$^\circ\text{C/W}$
	junction to case	$R_{BJC}$		30		
Storage temperature		$T_{STG}$	-55		+175	$^\circ\text{C}$

Symbol	Marking code	Max. repetitive peak reverse voltage $V_{RRM}$ (V)	Max. RMS voltage $V_{RMS}$ (V)	Max. DC blocking voltage $V_R$ (V)	Max. forward voltage @2A, $T_A = 25^\circ\text{C}$ $V_F$ (V)	Operating temperature $T_J$ ( $^\circ\text{C}$ )
BTK22S	BTK22S	20	14	20	0.45	-55 ~ +150
BTK24S	BTK24S	40	28	40	0.50	
BTK26S	BTK26S	60	42	60	0.70	
BTK210S	BTK210S	100	70	100	0.81	
BTK212S	BTK212S	120	84	120	0.85	
BTK215S	BTK215S	150	105	150	0.87	-55 ~ +175
BTK220S	BTK220S	200	140	200	0.90	

### ■ Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

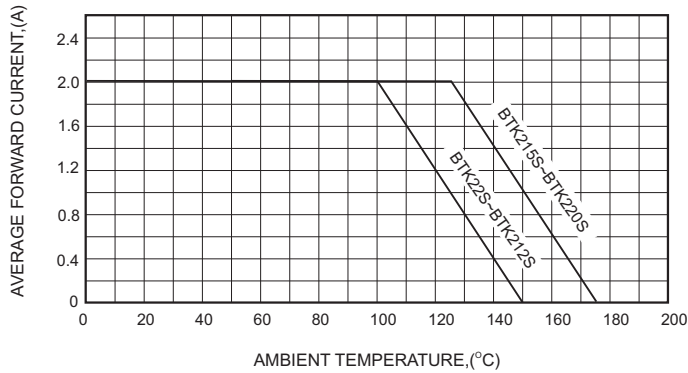


FIG.2-TYPICAL FORWARD CHARACTERISTICS

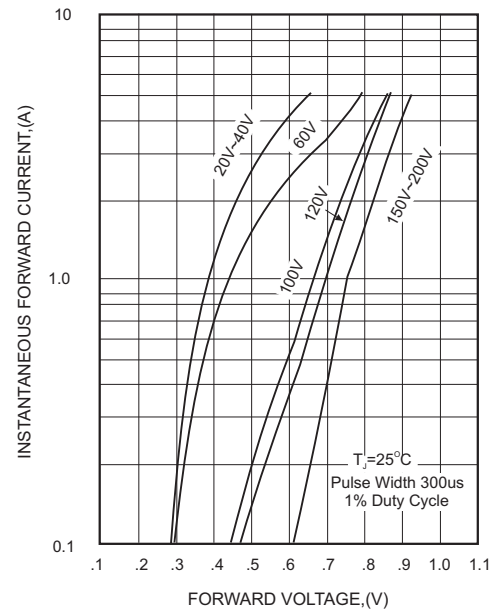


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

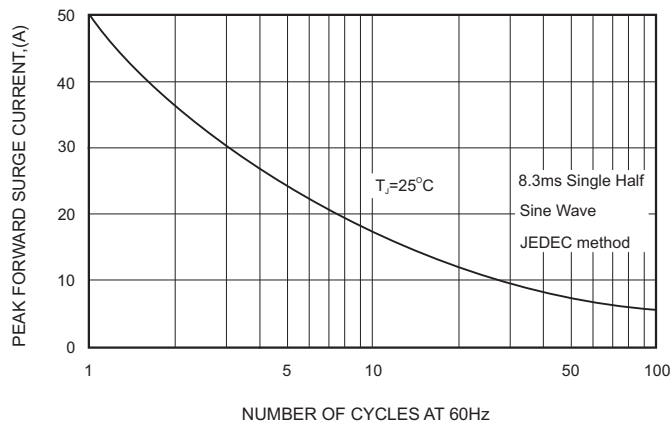


FIG.4-TYPICAL JUNCTION CAPACITANCE

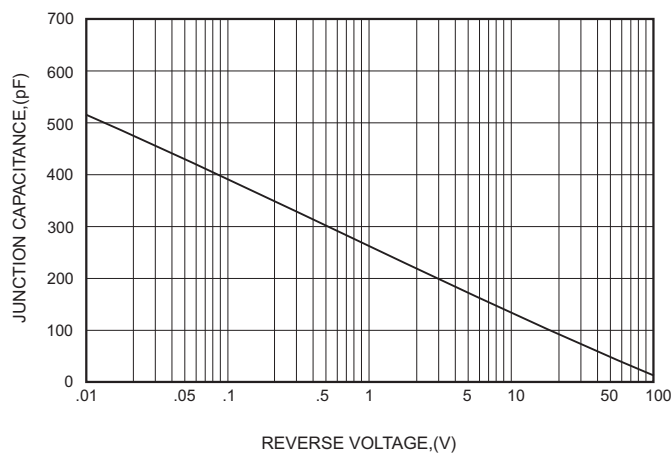
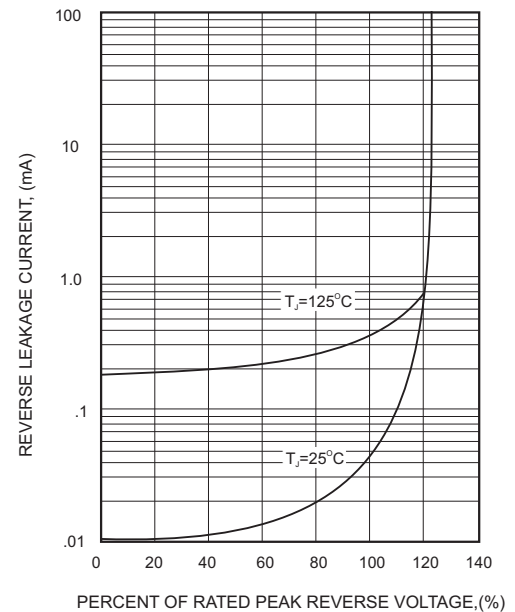
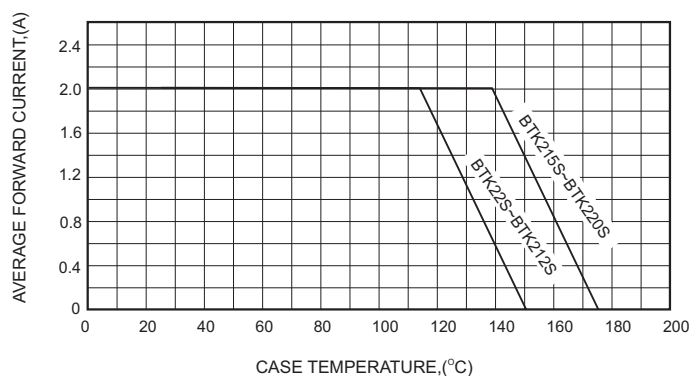


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

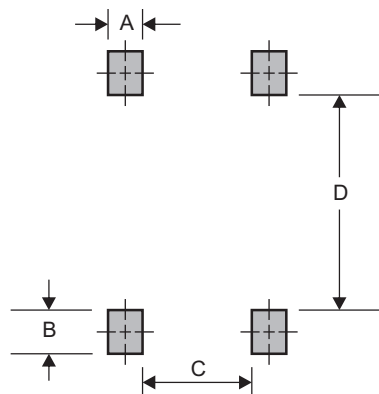


### ■ Rating and characteristic curves

FIG.6-TYPICAL FORWARD CURRENT DERATING CURVE



### ■ BTS foot print



A	B	C	D
0.030 (0.76)	0.059 (1.50)	0.070 (1.78)	0.226 (5.75)

Dimensions in inches and (millimeters)

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