

BRBAS40Q-04/05/06

Rev.A Dec.-2022

/ Descriptions

SOT-23

Schottky barrier diodes in a SOT-23 Plastic Package.

/ Features

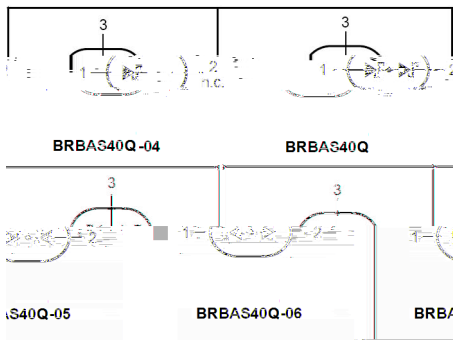
AEC-Q101

Low forward current, Low diode capacitance, small plastic SMD package, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

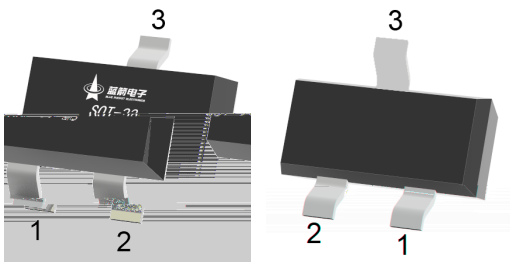
/ Applications

Ultra high-speed switching, voltage clamping, protection circuits, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



/ Pinning



PIN: See Equivalent Circuit.

/ Marking

Type	BRBAS40Q	BRBAS40Q-04	BRBAS40Q-05	BRBAS40Q-06
Marking	Q43	Q44	Q45	Q46

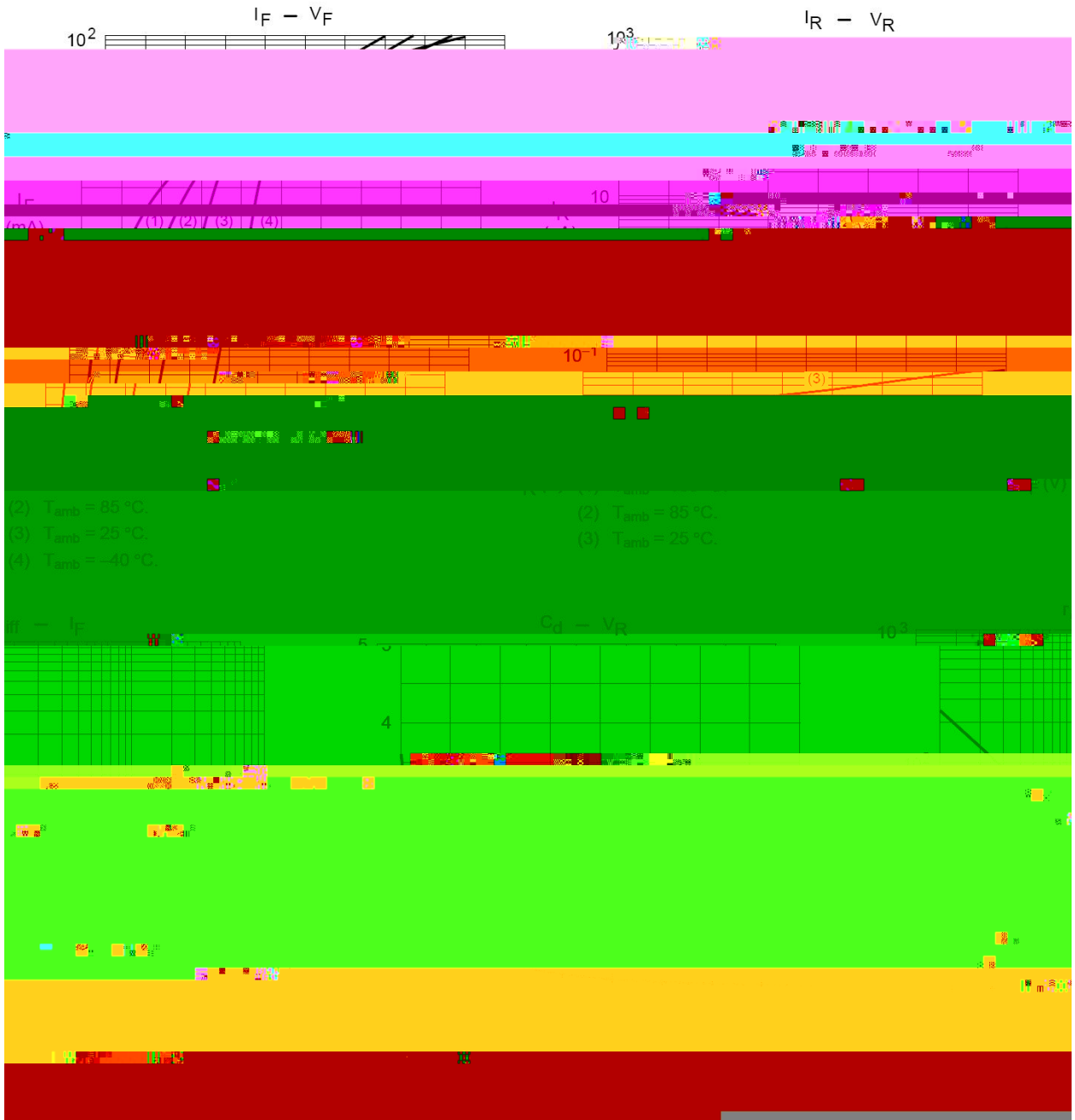
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Repetitive Reverse Voltage	V_R	40	V
Average Rectified Forward Current	I_F	120	mA
Repetitive Peak Forward Surge Current	$I_{FRM} (t_p \leq 1s)$	120	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM} (t_p < 10ms)$	100	mA
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	500	K/W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=1mA$			380	mV
		$I_F=10mA$			500	mV
		$I_F=40mA$			1.0	V
Instantaneous Reverse Current	I_R	$V_R=30V$			1.0	μA
		$V_R=40V$			10	μA
Diode Capacitance	C_d	$V_R=0$ $f=1MHz$			5	pF

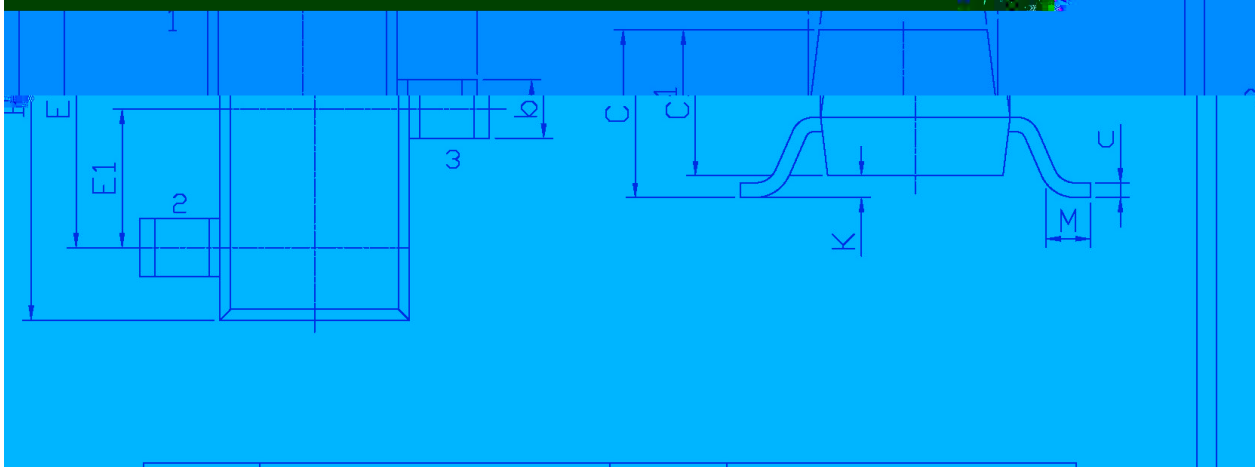
/ Electrical Characteristic Curve



/ Package Dimensions

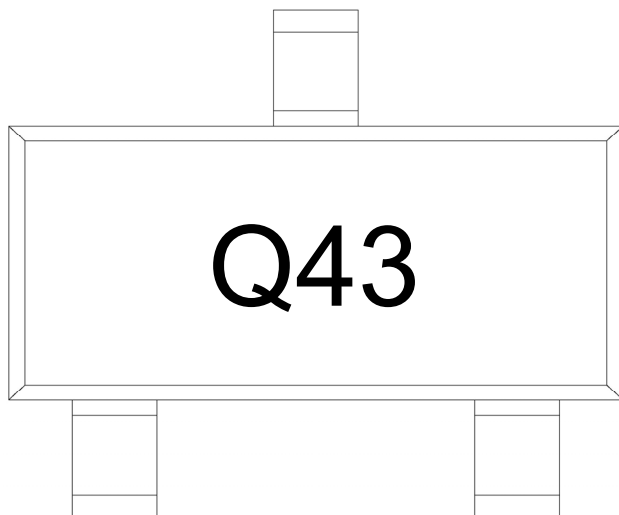
SOT-23

单位 mm



Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.30	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7°	
b	0.35	0.55			

/ Marking Instructions



Q

43

Note:

Q: Automobile halogen-free product Code

43: Product Type

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1 150 200 60 120sec; 1.Preheating:150~200 , Time:60~120sec.
- 2 255±5 5±0.5sec; 2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3 2 10 /sec. 3.Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" x8	180×120×180	390×385×205