

BSS138G
Rev.F May.-2026

@ f Parameter	... Z Symbol	f > Rating	% y Unit
Drain-Source Voltage	V _{DSS}	50	V
Gate-Source Voltage	V _{GSS}	±20	V
Drain Current – Continuous	I _D	220	mA
Peak Drain Current	I _{DM}	880	mA
Power Dissipation	P _D	360	mW
Thermal Resistance, Junction-to-Ambient	R _{JA}	350	/W
Storage Temperature Range	T _{stg}	-55 150	

@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > Typ	Â Ý > Max	% y Unit
Drain–Source Breakdown Voltage	V _{DSS}	V _{GS} =0V I _D =250 A	50			V
Zero Gate Voltage Drain Current	I _{DSS(1)}	V _{GS} =0 V _{DS} =50V			0.5	A
	I _{DSS(2)}	V _{GS} =0 V _{DS} =30V			0.1	A
Gate–Body Leakage.	I _{GSS}	V _{DS} =0V V _{GS} =±20			±10	A
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =1.0mA	0.8	1.6	2.2	V
Static Drain–Source On–Resistance	R _{DS(on)(1)}	V _{GS} =10V I _D =220mA		1.9	3.5	
	R _{DS(on)(2)}	V _{GS} =4.5V I _D =220mA		2.5	6.0	
Forward Transconductance	g _{FS}	V _{DS} =10V I _D =220mA	0.12	0.5		S
Drain–Source Diode Forward Voltage	V _{SD}	V _{GS} =0V I _S =440mA		0.8	1.4	V
Input Capacitance	C _{iss}	V _{DS} =10V V _{GS} =0V f=1.0MHz			50	pF
Output Capacitance	C _{oss}				25	
Reverse Transfer Capacitance	C _{rss}				8	
Gate Resistance	R _G	V _{GS} =15mV f=1.0MHZ		9		
Turn–On Delay Time	t _{d(on)}	V _{DD} =30V I _D =290mA V _{GS} =10V R _{GEN} =25		2.5	5	ns
Turn–On Rise Time	t _r			9	18	ns
Turn–Off Delay Time	t _{d(off)}			20	36	ns
Turn–Off Fall Time	t _f			7	14	ns

Ö ? d • Ž ¢ / Electrical Characteristic Curve

Ø □ =) ¢ / Package Dimensions

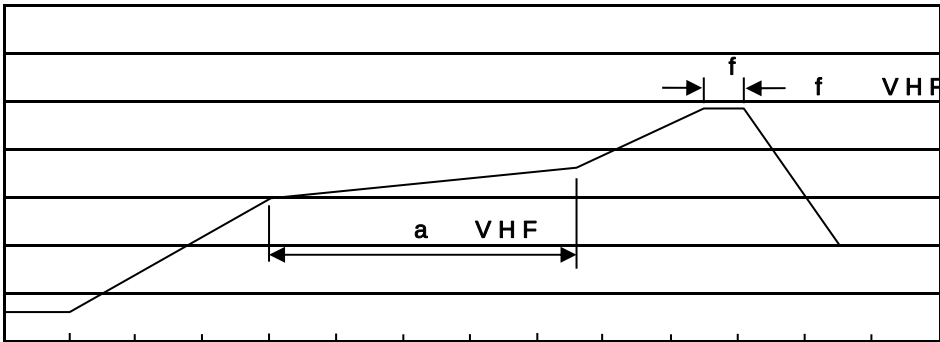
, M y f / Marking Instructions

GSS

^a ϕ y
G y —) í D } W A
SS y ° Z W A
Note:
G: HF Product Code
SS: Product Type Code

šWD t...•Žč (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

7HPSHUDWXUH



7LPH VHF

ačy

- 10•Ä½“† 150½180 - kž• 60½90sec;
- 20•Q>“† 245 r5 - kž•4 Ò 5 r0.5sec;
- 30•D Nò i Ò 0 ,† 2½10 - /sec.

Note:

- 1.Preheating:150~180 - , Time:60~90sec.
- 2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.
- 3. Cooling Speed: 2~10 - /sec.

ÂD /Că p ¯ »] / Resistance to Soldering Heat Test Conditions

“†y 260 r5 - ž•y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type 7>û ~ E	Units ;>û H					Dimension ;>û p . (unit Åmm³)		
	Units/Reel /-	Reels/Inner Box -- /-	Units/Inner Box /-	Inner Boxes/Outer Box - /1ç	Units/Outer Box /1ç	Reel	Inner Box	Outer Boxç
SOT-23	3,000	10	30,000	6	180,000	7 T×8	180×120×180	390×385×205

„Đ y f / Notices