GST2SC3838

High-Frequency Amplifier Transistor NPN Silicon

Product Description

This device is designed as a general purpose amplifier and switch.

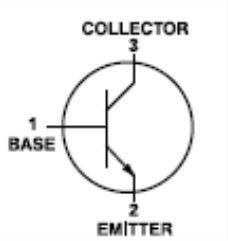
Features

- Collector-Emitter Voltage : 11V
- Collector Current : 50mA
- Lead(Pb)-Free

Packages & Pin Assignments

GST2SC3838F(SOT-23)

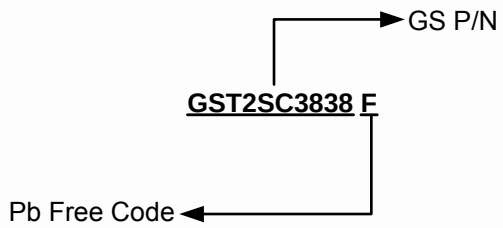
Pin	Description
1	Base
2	Emitter
3	Collector



Marking Information

P/N	Package	Part Marking
GST2SC3838F	SOT-23	AD

Ordering Information



Part Number	Package	Quantity
GST2SC3838F	SOT-23	3000 PCS

Absolute Maximum Ratings

T_A=25°C

Symbol	Conditions	Value	Unit
V_{CEO}	Collector-Emitter Voltage	11	V
V_{CBO}	Collector-Base Voltage	20	V
V_{EBO}	Emitter-Base Voltage	3.0	V
I_C	Collector Current	50	mA
P_D	Collector Power Dissipation T_A=25°C	200	mW
T_J, T_{STG}	Junction and Storage Temperature Range	-55 to +150	°C

Electrical Characteristics

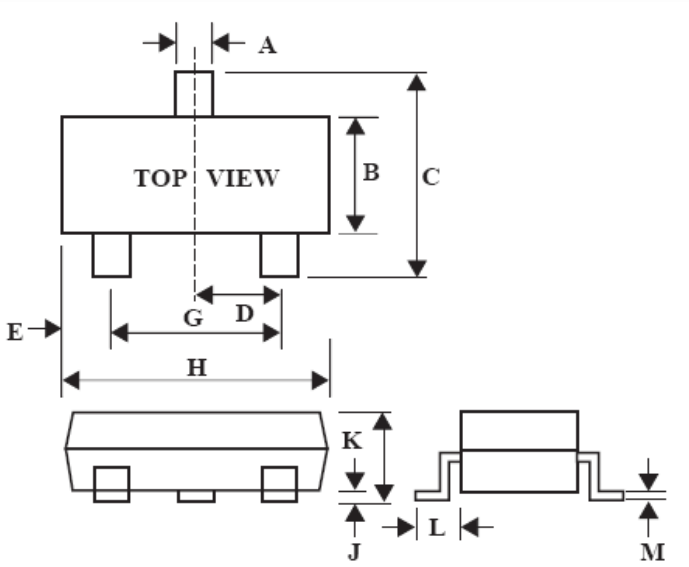
(T_A=25°C unless otherwise noted)

Symbol	Conditions	Min	Max	Unit
BV_{CEO}	Collector-Emitter Breakdown Voltage (I_C=1.0mA)	11	-	V
BV_{CBO}	Collector-Base Breakdown Voltage (I_C=10uA)	20	-	V
BV_{EBO}	Collector-Emitter Breakdown Voltage (I_E=10uA)	3.0	-	V
I_{CBO}	Collector Cutoff Current (V_{CB}=10V)	-	0.5	uA
I_{EBO}	Emitter Cutoff Current (V_{EB}=2.0V)	-	0.5	uA

Symbol	Conditions	Min	Typ	Max	Unit
h_{FE}	DC Current Gain (I_C=5.0mA, V_{CE}=10V)	56	-	180	-
f_T	Transition Frequency (V_{CE}=10V, I_E=-10mA, f=500MHz)	1.4	3.2	-	GHz
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=10mA, I_B=5mA)	-	-	0.5	V
Cob	Output Capacitance (V_{CB}=10V, I_E=0A, f=1MHz)	-	0.8	1.5	pF
rbb'cc	Collector-Base Time Constant (V_{CB}=10V, I_C=10mA, f=31.8MHz)	-	4	12	ps
NF	Noise Factor (V_{CE}=6V, I_C=2mA, f=500MHz, Rg=50Ω)	-	3.5	-	dB

Package Dimension

SOT-23



Dimensions

Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.35	0.51	0.014	0.020
B	1.19	1.40	0.047	0.055
C	2.10	3.00	0.083	0.118
D	0.85	1.05	0.033	0.041
E	0.46	1.00	0.018	0.039
G	1.70	2.10	0.067	0.083
H	2.70	3.10	0.106	0.122
J	0.01	0.13	0.000	0.005
K	0.89	1.10	0.035	0.043
L	0.30	0.61	0.011	0.024
M	0.076	0.25	0.002	0.010

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CONTACT US

GS Headquarter	
	4F.,No.43-1,Lane11,Sec.6,Minquan E.Rd Neihu District Taipei City 114, Taiwan (R.O.C)
	886-2-2657-9980
	886-2-2657-3630
	sales_twn@gs-power.com

Wu-Xi Branch	
	No.21 Changjiang Rd., WND, Wuxi, Jiangsu, China (INFO. &. TECH. Science Park Building A 210 Room)
	86-510-85217051
	86-510-85211238
	sales_cn@gs-power.com

RD Division	
	824 Bolton Drive Milpitas. CA. 95035
	1-408-457-0587