

GST2SC1383 Series

NPN General Purpose Transistors

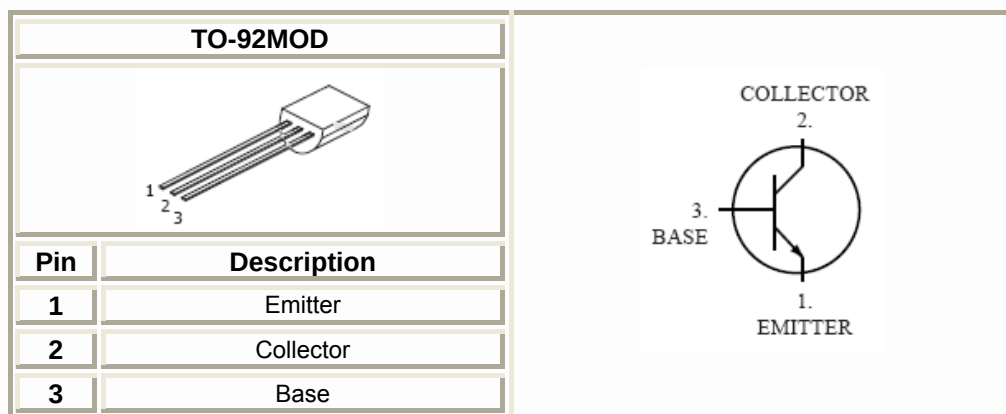
Product Description

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

Features

- Collector-Emitter Voltage : 25V (2SC1383)
50V (2SC1384)
- Collector Current : 1.0A
- Lead(Pb)-Free

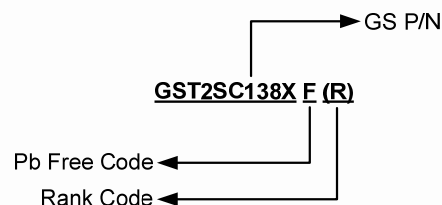
Packages & Pin Assignments



Marking Information

P/N	Package	Rank	Part Marking
GST2SC1383F	TO-92MOD	(Q) / (R) / (H)	2SC1383
GST2SC1384F	TO-92MOD	(Q) / (R) / (H)	2SC1384

Ordering Information



Part Number	Package	Quantity
GST2SC1383F(Q or R or H)	TO-92MOD	500 PCS
GST2SC1384F(Q or R or H)	TO-92MOD	500 PCS

Absolute Maximum Ratings

(T_A=25°C unless otherwise noted)

Symbol	Conditions	Value	Unit
V _{CEO}	Collector-Emitter Voltage GST2SC1383F GST2SC1384F	25 50	V
V _{CBO}	Collector-Base Voltage GST2SC1383F GST2SC1384F	30 60	V
V _{EBO}	Emitter-Base Voltage	5.0	V
I _{C(DC)}	Collector Current-Continuous (DC)	1.0	A
I _{CP(DC)}	Peak Collector Current	1.5	A
P _D	Total Device Dissipation Alumina Substrate (1) T _A =25°C Derate above 25°C	1.0 8.0	W mW/°C
R _{θJA}	Thermal Resistance Junction to Ambient	125	°C/W
T _J	Junction Temperature Range	-55 to +150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

Note 1: Alumina=0.4 x 0.3 x 0.024in, 99.5% alumina

Electrical Characteristics

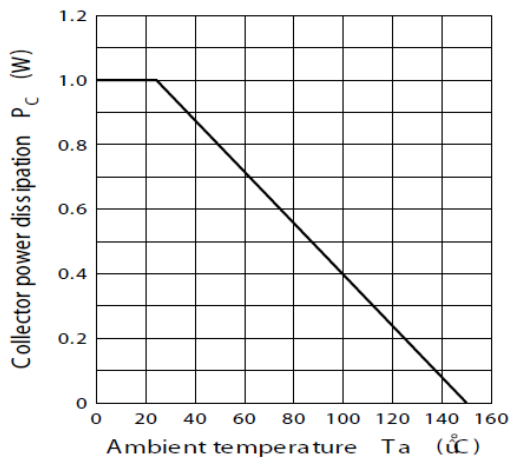
(T_A=25°C unless otherwise noted)

Symbol	Conditions	Min	Max	Unit
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =2mA, I _B =0mA) GST2SC1383F GST2SC1384F	25 50	-	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =10uA, I _E =0mA) GST2SC1383F GST2SC1384F	30 60	-	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _E =10uA, I _C =0mA)	5.0	-	V
I _{CBO}	Collector-Base Cutoff Current (V _{CB} =20V, I _E =0mA)	-	0.1	uA
h _{FE (1)}	DC Current Gain (I _C =500mA, V _{CE} =10V)	85	340	-
h _{FE (2)}	DC Current Gain (I _C =1.0A, V _{CE} =5.0V)	50	-	-
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =500mA, I _B =50mA)	-	1.2	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =500mA, I _B =50mA)	-	0.4	V
f _T	Current-Gain-Bandwidth Product (I _C =50mA, V _{CE} =10V, f=30MHz)	100	-	MHz

Classification of h_{FE}

Rank	Q	R	H
Range	85-170	120-240	170-340

Typical Performance Characteristics



**FIG1. Total Power Dissipation
Vs Ambient Temperature**

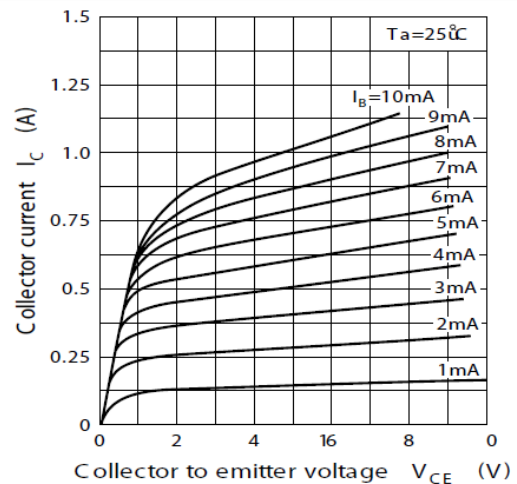
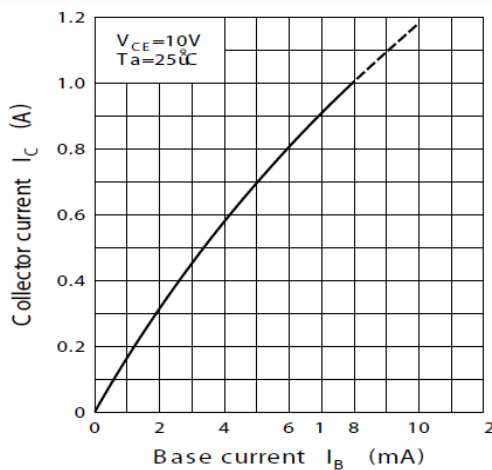
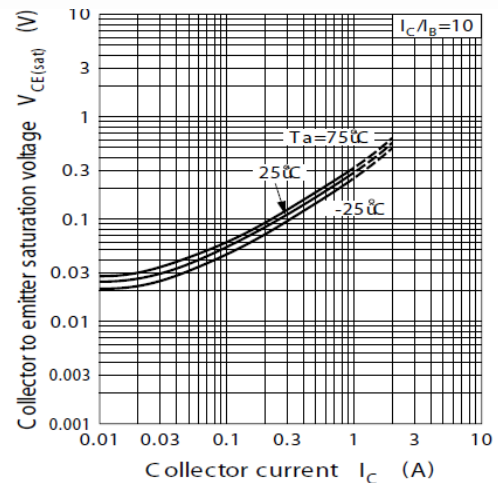


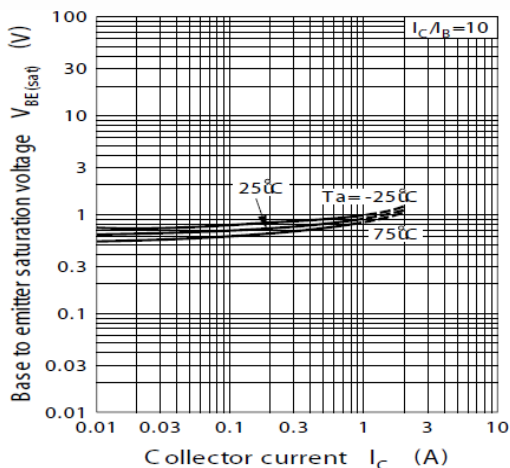
FIG2. Static Characteristic



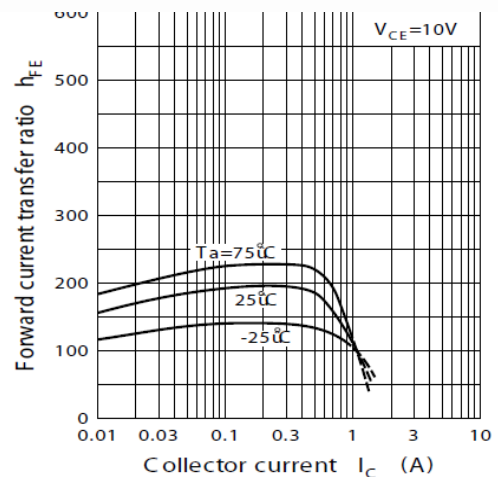
**FIG3. Collect Current Vs
Base Current**



**FIG4. Collector-Emitter
Saturation Voltage**



**FIG 5. Base-Emitter Saturation
Voltage**



**FIG6. Current Gain Bandwidth
Product**

Typical Performance Characteristics (Continue)

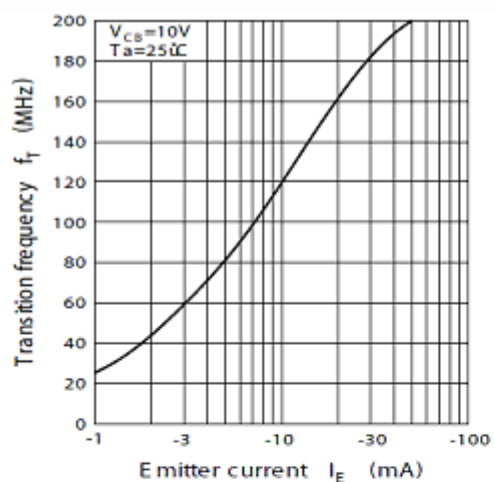


FIG7. Current-Gain-Bandwidth

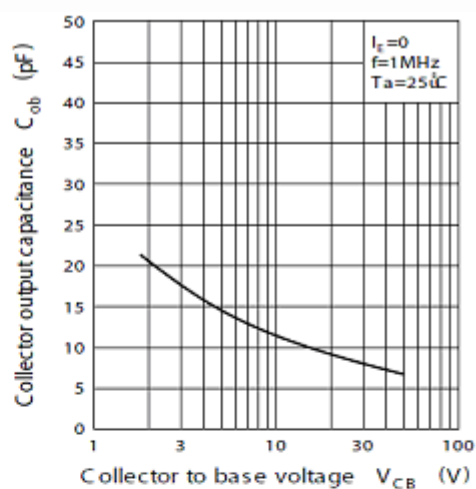


FIG.8. Capacitance

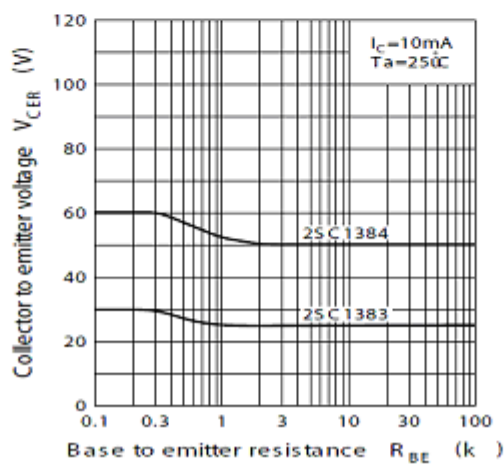
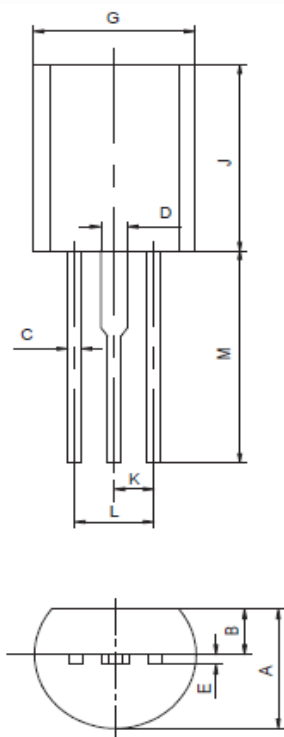


FIG9. V_{CER} VS R_{BE}

Package Dimension

TO-92MOD



Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	4.7	5.1	0.185	0.2
B	1.73	2.03	0.068	0.08
C	0.4	0.6	0.016	0.024
D	0.9	1.1	0.035	0.043
E	0.4	0.5	0.016	0.02
G	5.8	6.2	0.228	0.244
J	8.4	8.8	0.331	0.346
K	1.5 (Typ)		0.059(Typ)	
L	2.9	3.1	0.114	0.122
M	12.2	13.45	0.48	0.53

NOTICE

Information furnished is believed to be accurate and reliable. However Globaltech Semiconductor assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Globaltech Semiconductor. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information without express written approval of Globaltech Semiconductor.

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