

GSTDT5551J4F

NPN General Purpose Transistor

Product Description

Collector-Emitter Voltage 160V
Collector Current 200mA

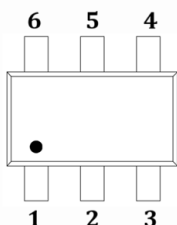
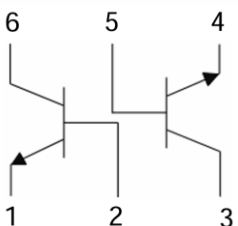
Features

- Rugged and Reliable
- RoHS Compliant and Halogen Free

Mechanical Data

- Case : SOT-363 Package
- Epoxy meets UL 94 V-0 Flammability Rating

Package and Pin Assignment

SOT-363		Equivalent Circuit
		
Pin	Description	
1	EMITTER 1	
2	BASE 1	
3	COLLECTOR 2	
4	EMITTER 2	
5	BASE 2	
6	COLLECTOR 1	

Ordering and Marking Information

Ordering Information			
Part Number	Package	Marking Code	Quantity/Reel
GSTDT5551J4F	SOT-363	K4N	3,000 PCS
GSTDT5551J4F			
- Product Code: GSTDT5551	- Package Code: J4 for SOT-363 Package	- Green Level: F for RoHS Compliant and Halogen Free	

GSTDT5551J4F

Marking Information

K4N

- **Product Code:**

K4N

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Symbol	Parameter	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	160	V
V _{CBO}	Collector-Base Voltage	180	V
V _{EBO}	Emitter-Base Voltage	6.0	V
I _{C(DC)}	Collector Current (DC)	200	mA
P _D	Power Dissipation T _A =25°C*	200	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	625	°C/W
T _J	Junction Temperature Range	150	°C
T _{STG}	Storage Temperature Range	-55 to +150	°C

* Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

Electrical Characteristics (T_A=25°C unless otherwise specified)

Symbol	Description	Conditions	Min	Max	Unit
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C =1mA, I _B =0mA	160	-	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C =0.1mA, I _E =0mA	180	-	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E =0.01mA, I _C =0mA	6.0	-	V
I _{CBO}	Collector Cutoff Current	V _{CB} =120V, I _E =0mA	-	50	nA
I _{EBO}	Emitter Cutoff Current	V _{EB} =4V, I _C =0mA	-	50	nA
h _{FE}	DC Current Gain	I _C =1mA, V _{CE} =5.0V	80	-	-
		I _C =10mA, V _{CE} =5.0V	100	300	-
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C =10mA, I _B =1mA	-	0.15	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =10mA, I _B =1mA	-	1.00	V
f _T	Current Gain - Bandwidth Product	V _{CE} =20V, I _C =10mA, f=100MHz	100	300	MHz
C _{ob}	Output Capacitance	V _{CB} =10.0V, I _C =0, f=1.0MHz	-	6.0	pF
NF	Noise Figure	V _{CB} =5V, I _C =200μA, f=1KHz R _S =1KΩ	-	8	dB

Typical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

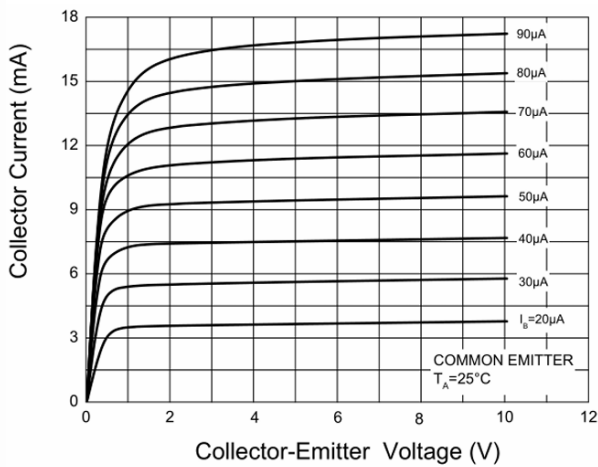


Figure 1. Static Characteristic

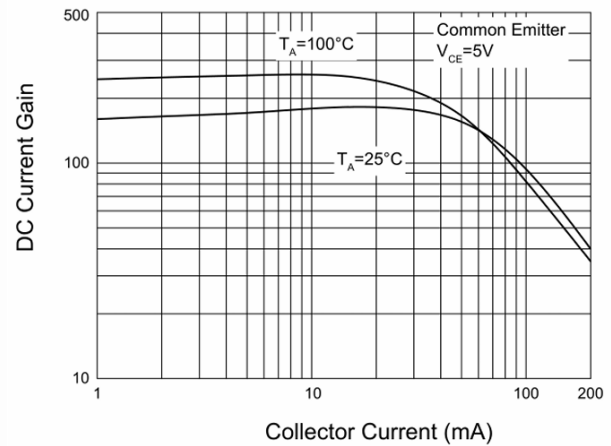


Figure 2. DC Current Gain Characteristics

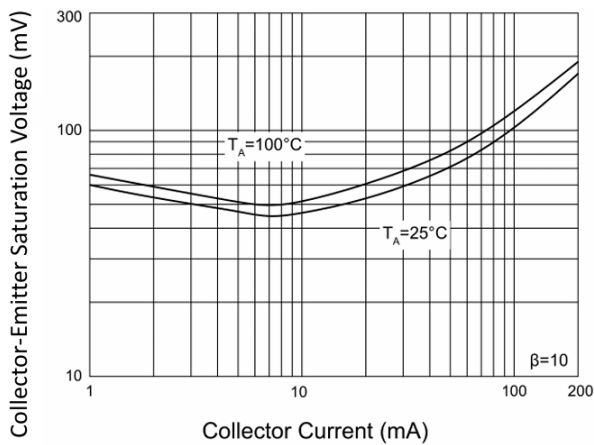


Figure 3. Collector-Emitter Saturation Voltage

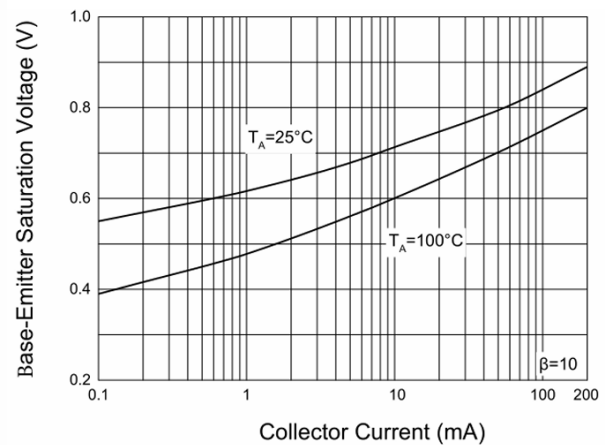


Figure 4. Base-Emitter Saturation Voltage

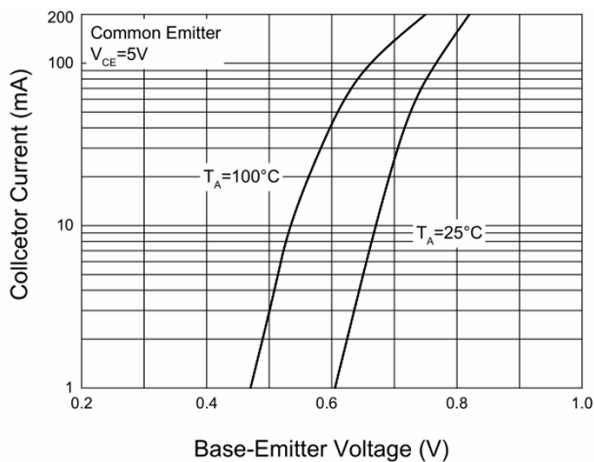


Figure 5. Base-Emitter Voltage Characteristics

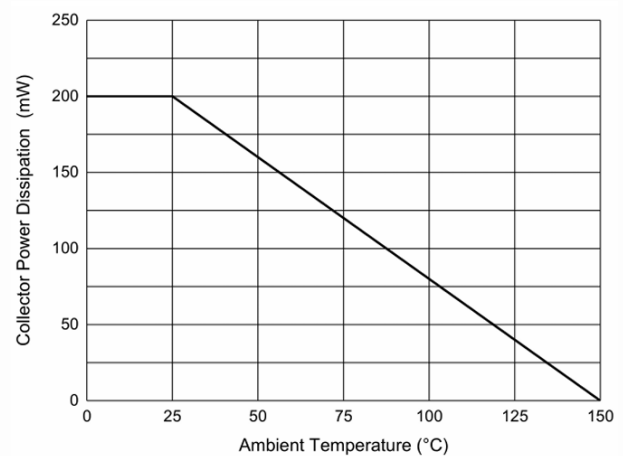
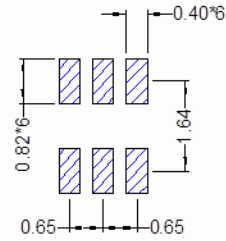
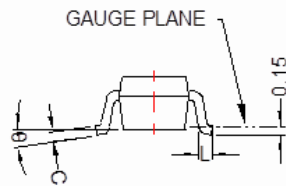
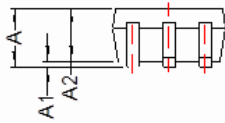
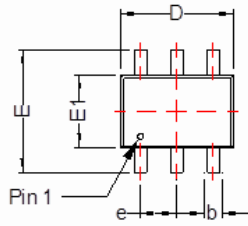


Figure 6. Power Derating Curve

SOT-363

Package Dimension

Recommended Land Pattern



(Unit: mm)

Dimensions				
SYMBOL	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.80	1.10	0.031	0.043
A1	0.00	0.10	0.000	0.004
A2	0.70	1.00	0.028	0.039
b	0.15	0.30	0.006	0.012
c	0.08	0.25	0.003	0.010
D	1.80	2.20	0.071	0.087
E	1.80	2.40	0.071	0.094
E1	1.15	1.35	0.045	0.053
e	0.65 BSC		0.026 BSC	
L	0.26	0.45	0.010	0.018
θ	0°	8°	0°	8°





NOTE:



Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions.

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CONTACT US

GS Headquarter	
	4F, NO.43-1, Lane 11, 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

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