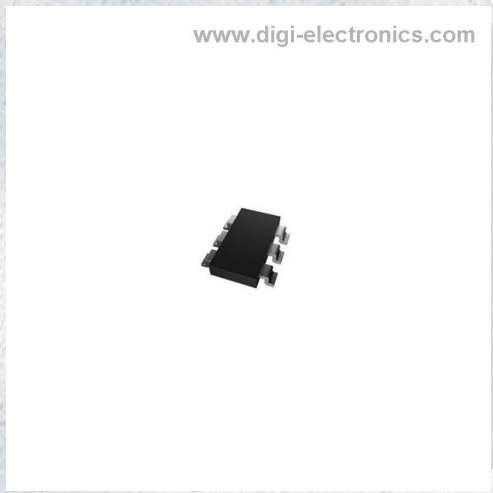
SMBT5551-TP Datasheet



https://www.DiGi-Electronics.com

DiGi Electronics Part Number	SMBT5551-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	SMBT5551-TP
Description	Interface
Detailed Description	Bipolar (BJT) Transistor Array 2 NPN 160V 600mA 30 0MHz 300mW Surface Mount SOT-23-6L

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
SMBT5551-TP	Micro Commercial Co
Series:	Product Status:
-	Active
Transistor Type:	Current - Collector (Ic) (Max):
2 NPN	600mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
160V	200mV @ 5mA, 50mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
50nA (ICBO)	100 @ 10mA, 5V
Power - Max:	Frequency - Transition:
300mW	300MHz
Operating Temperature:	Mounting Type:
-55°C ~ 150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
SOT-23-6	SOT-23-6L
Base Product Number:	
SMBT5551	

Environmental & Export classification

REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0075	

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

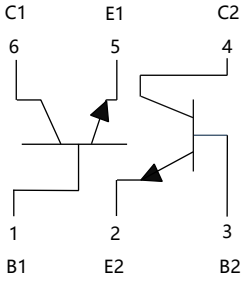
NPN General Purpose Amplifier

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55℃ to +150℃
- Storage Temperature Range: -55℃ to +150℃
- Thermal Resistance: 416℃/W Junction to Ambient

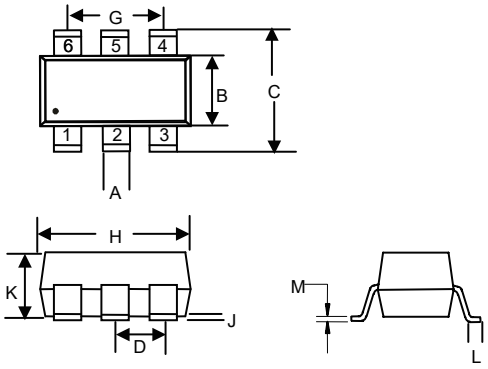
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	180	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Collector Power Dissipation	P_C	300	mW

Internal Structure



Marking: 5551S

SOT23-6L



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.012	0.020	0.30	0.50	
B	0.051	0.070	1.30	1.80	
C	0.087	0.126	2.20	3.20	
D	0.037		0.95		TYP.
G	0.074		1.90		TYP.
H	0.106	0.122	2.70	3.10	
J	0.002	0.006	0.05	0.15	
K	0.030	0.051	0.75	1.30	
L	0.012	0.024	0.30	0.60	
M	0.003	0.008	0.08	0.22	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	180			V	I_C=100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	160			V	I_C=1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6			V	I_E=10μA, I_C=0
Collector-Base Cutoff Current	I_{CBO}			50	nA	V_{CB}=120V, I_E=0
Emitter-Base Cutoff Current	I_{EBO}			50	nA	V_{EB}=4V, I_C=0
DC Current Gain (Note1)	$h_{FE(1)}$	80				V_{CE}=5V, I_C=1mA
	$h_{FE(2)}$	100		250		V_{CE}=5V, I_C=10mA
	$h_{FE(3)}$	30				V_{CE}=5V, I_C=50mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.15	V	I_C=10mA, I_B=1mA
				0.2	V	I_C=50mA, I_B=5mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.0	V	I_C=10mA, I_B=1mA
				1.0	V	I_C=50mA, I_B=5mA
Transition Frequency	f_T	100		300	MHz	V_{CE}=10V, I_C=10mA, f=100MHz
Collector Output Capacitance	C_{ob}			6	pF	V_{CB}=10V, I_E=0, f=1MHz,

Note: 1.Pluse Width ≤ 300μs, Duty Cycle ≤ 2.0%

Curve Characteristics

Fig. 1 - Static Characteristics

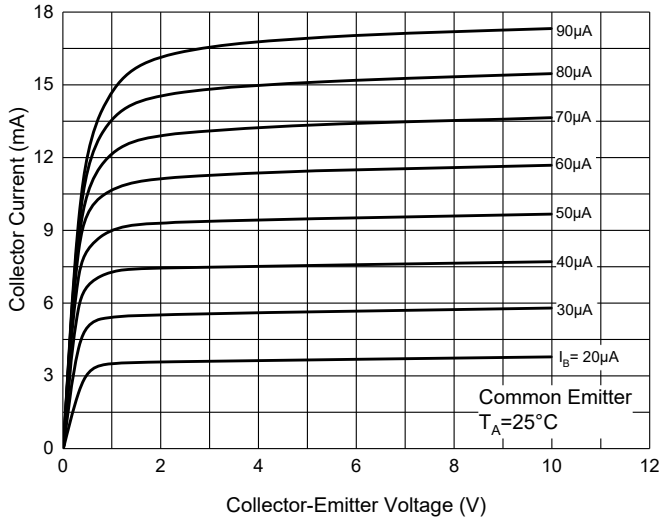


Fig. 2 - DC Current Gain Characteristics

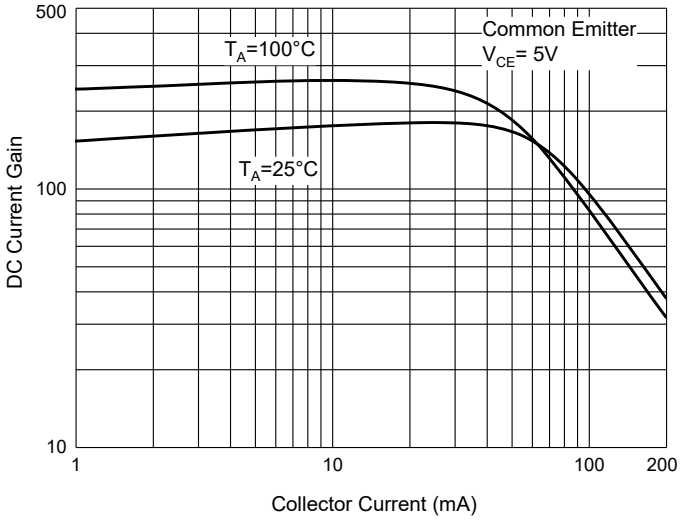


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

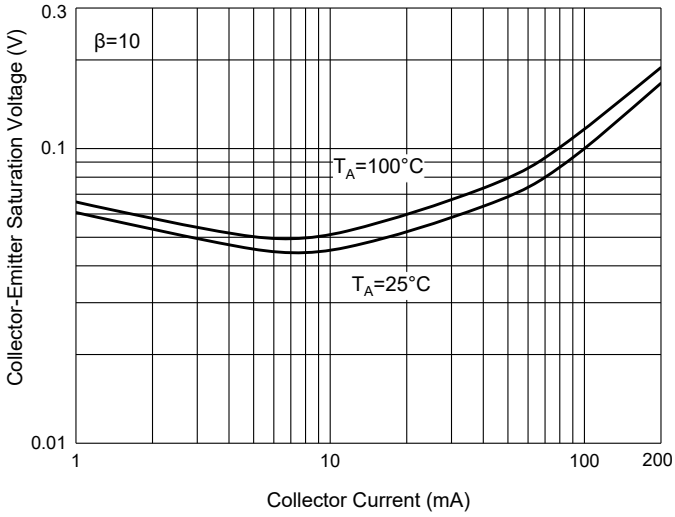


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

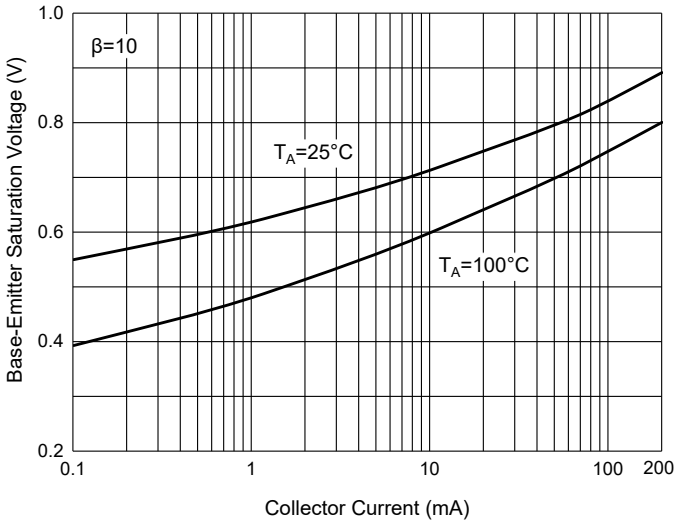


Fig. 5 - Base-Emitter Voltage Characteristics

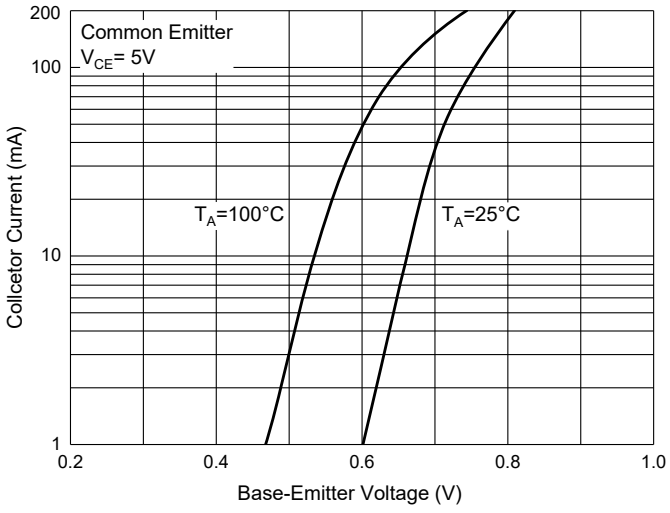
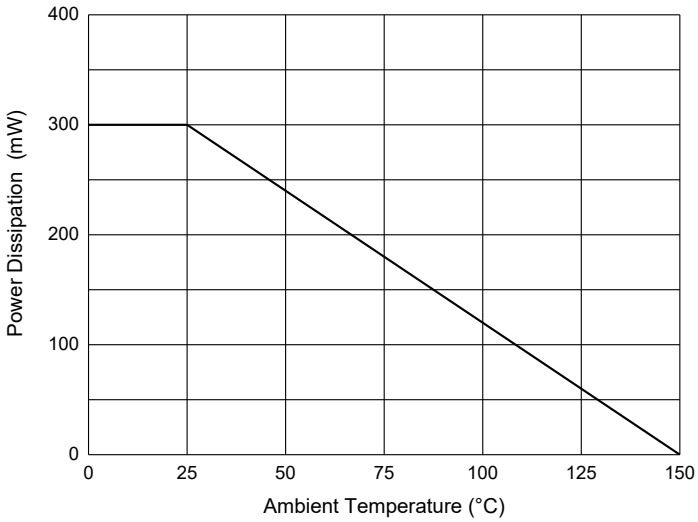


Fig. 6 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

OUR CERTIFICATE

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