2SB1412-R-TP Datasheet

https://www.DiGi-Electronics.com

DiGi Electronics Part Number	2SB1412-R-TP-DG
Manufacturer	Micro Commercial Co
Manufacturer Product Number	2SB1412-R-TP
Description	TRANS PNP 30V 5A DPAK
Detailed Description	Bipolar (BJT) Transistor PNP 30 V 5 A 120MHz 1 W Surface Mount DPAK

Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
2SB1412-R-TP	Micro Commercial Co
Series:	Product Status:
-	Active
Transistor Type:	Current - Collector (Ic) (Max):
PNP	5 A
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ Ib, Ic:
30 V	1V @ 100mA, 4A
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ Ic, Vce:
500nA (ICBO)	82 @ 500mA, 2V
Power - Max:	Frequency - Transition:
1 W	120MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Surface Mount
Package / Case:	Supplier Device Package:
TO-252-3, DPAK (2 Leads + Tab), SC-63	DPAK
Base Product Number:	
2SB1412	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.29.0075	

Micro Commercial Components

2SB1412

PNP Silicon Epitaxial Transistors

Features

- Low Collector Saturation Voltage
- Execllent Current-to-Gain Characteristics
- Halogen Free ."Green"Device(Note 1)
- 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)

Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55℃ to +150℃
- Storage Temperature Range: -55℃ to +150℃
- Thermal Resistance: 125℃/W Junction to Ambient

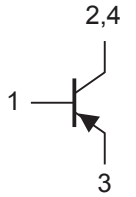
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-30	V
Collector-Emitter Voltage	V_{CEO}	-20	V
Emitter-Base Voltage	V_{EBO}	-6	V
Continuous Collector Current	I_C	-5	A
Power Dissipation	P_D	1	W

Note:

1.Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

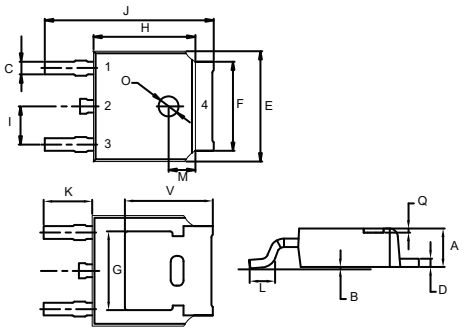
Marking: B1412

Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

DPAK(TO-252)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		TYP.
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		TYP.
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		TYP.
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		TYP.

Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-30			V	I_C=-50μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-20			V	I_C=-1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6			V	I_E=-50μA, I_C=0
Collector Cutoff Current	I_{CBO}			-0.5	μA	V_{CB}=-20V, I_E=0
Emitter Cutoff Current	I_{EBO}			-0.5	μA	V_{EB}=-5V, I_C=0
DC Current Gain	h_{FE}	82		390		V_{CE}=-2V, I_C=-0.5A
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-1.0	V	I_C=-4A, I_B=-100mA
Transition Frequency	f_T		120		MHz	V_{CE}=-6V, I_C=-500mA, f=30MHz
Collector Output Capacitance	C_{ob}		60		pF	V_{CB}=-20V, I_E=0, f=1MHz

Classification of h_{FE}

Rank	P	Q	R
Range	82-180	120-270	180-390

Curve Characteristics

Fig. 1 - Static Characteristics

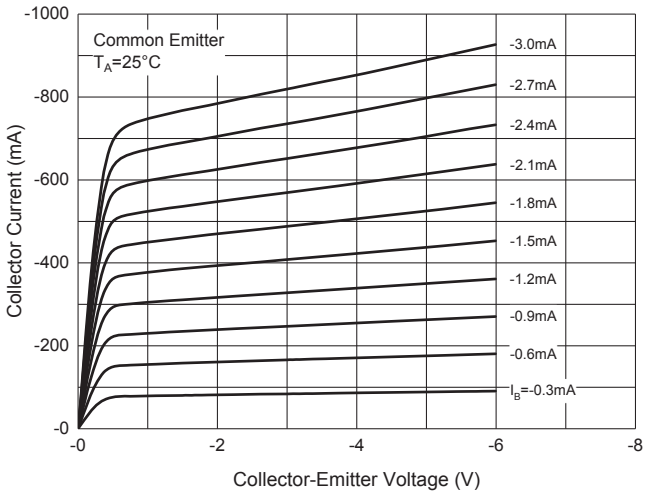


Fig. 2 - DC Current Gain Characteristics

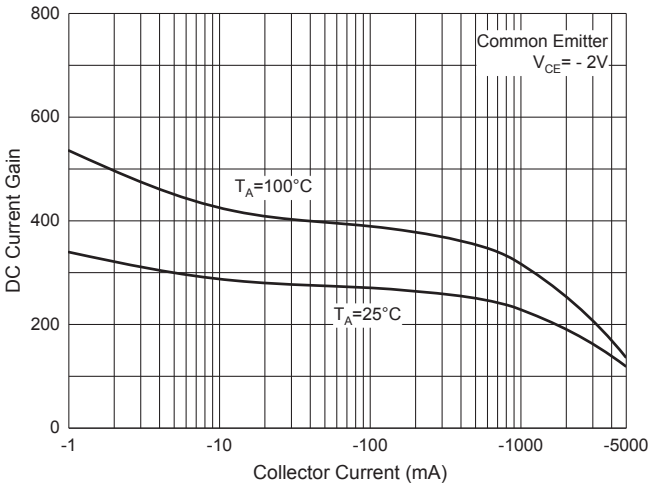


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

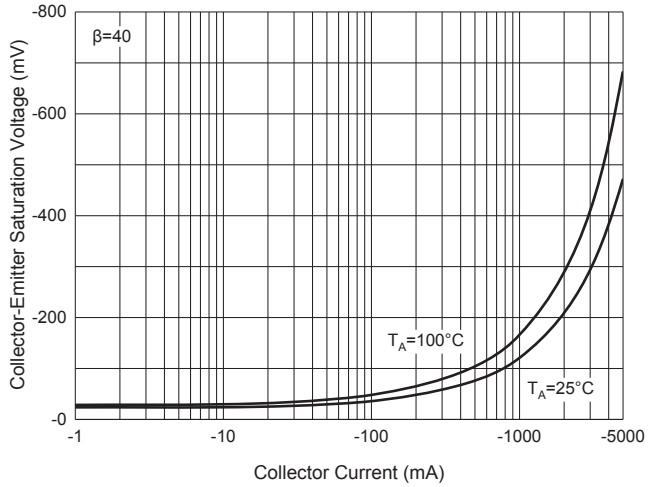


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

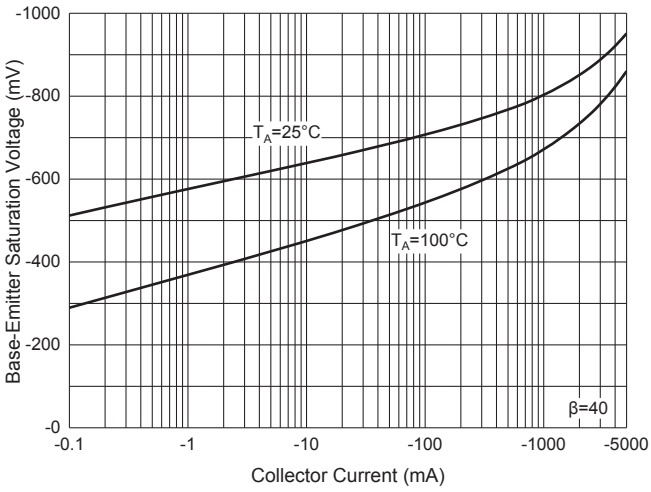


Fig. 5 - Transition frequency Characteristics

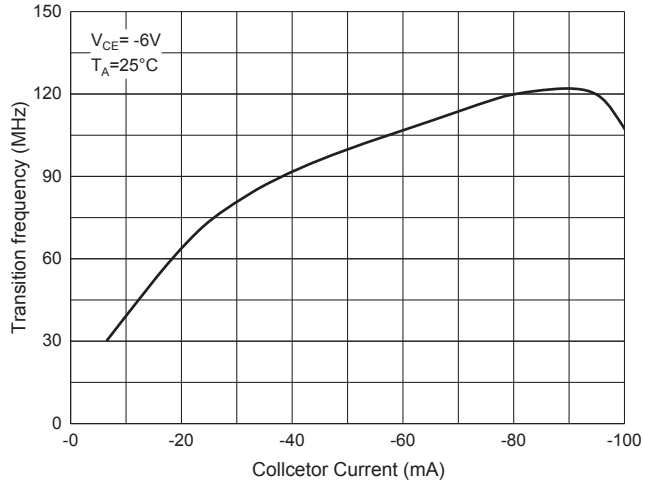
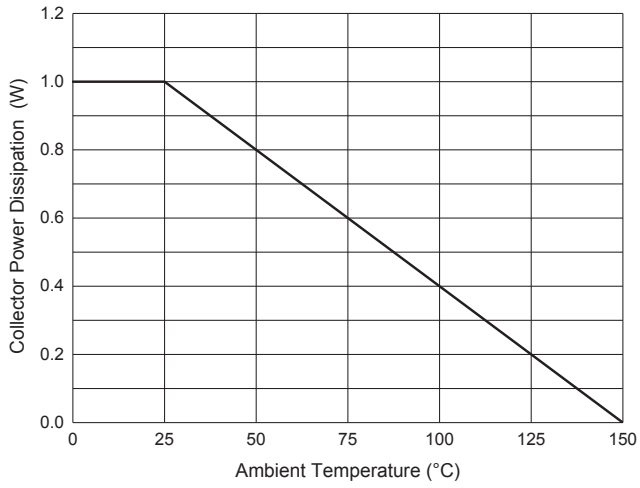


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

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