

**Features**

- High Current Capacity in compact package.
- Epitaxial planar type.
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Maximum Ratings @ 25°C Unless Otherwise Specified**

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Continuous Collector Current	$I_c$	1500	mA
Power Dissipation	$P_D$	300	mW

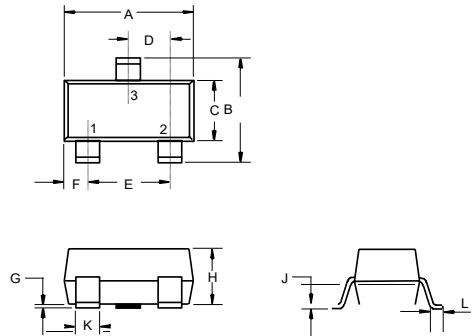
**Thermal characteristics**

Parameter	Symbol	Rating	Unit
Operating Junction Temperature Range	$T_J$	-55~+150	°C
Storage Temperature Range	$T_{stg}$	-55~+150	°C
Thermal Resistance from Junction to Ambient	$R_{th(j-a)}$	417	°C/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.

**NPN  
General Purpose  
Transistors**

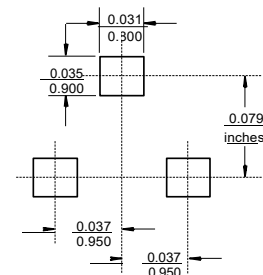
**SOT-23**



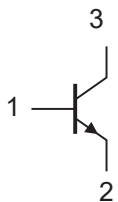
**DIMENSIONS**

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

**Suggested Solder Pad Layout**

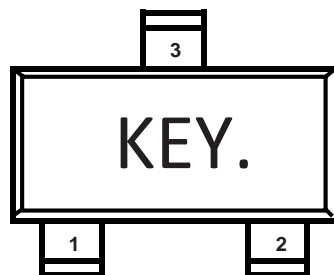


**Internal Structure**



- 1. Base
- 2. Emitter
- 3. Collector

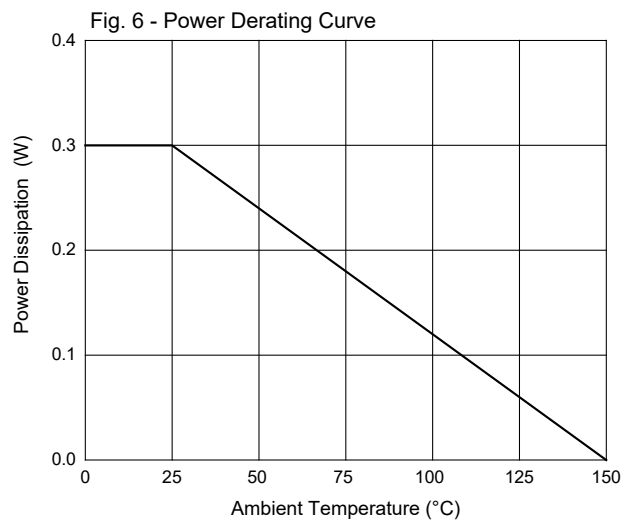
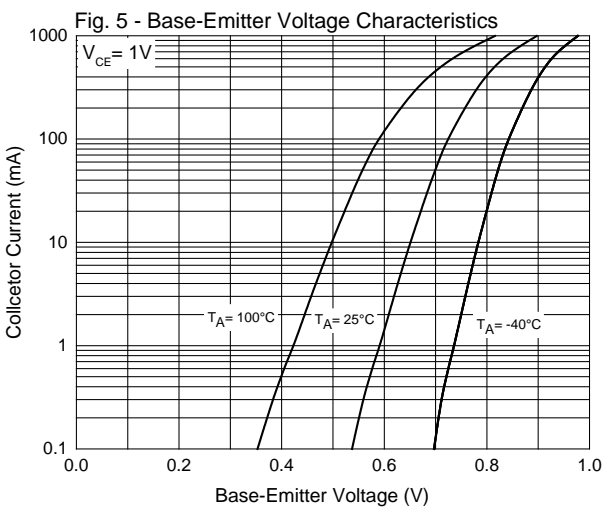
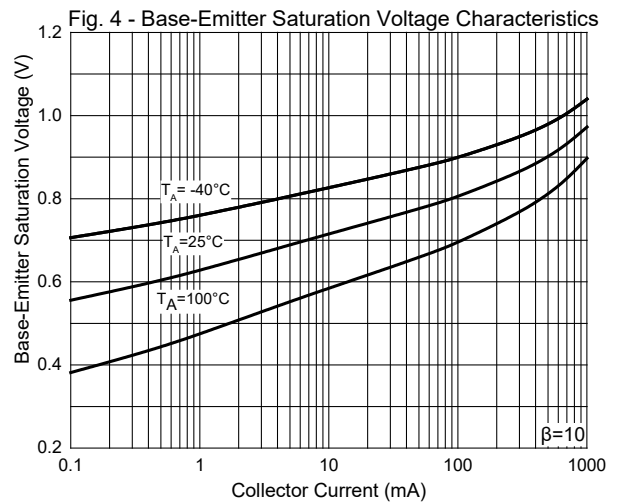
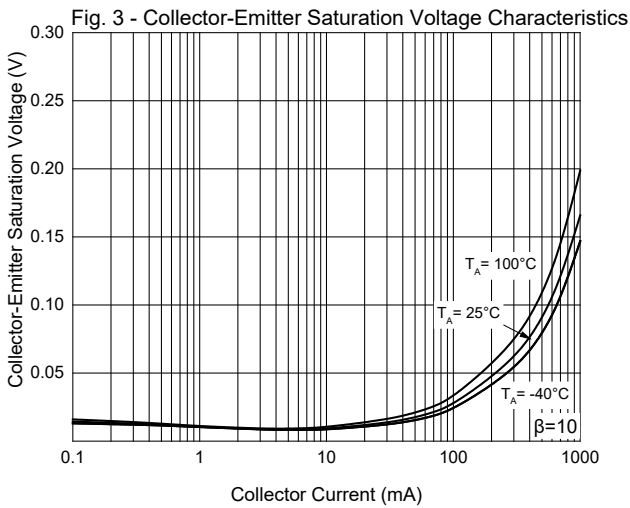
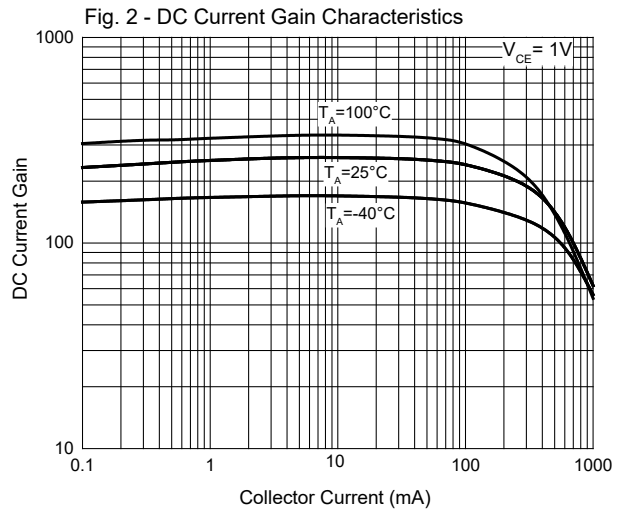
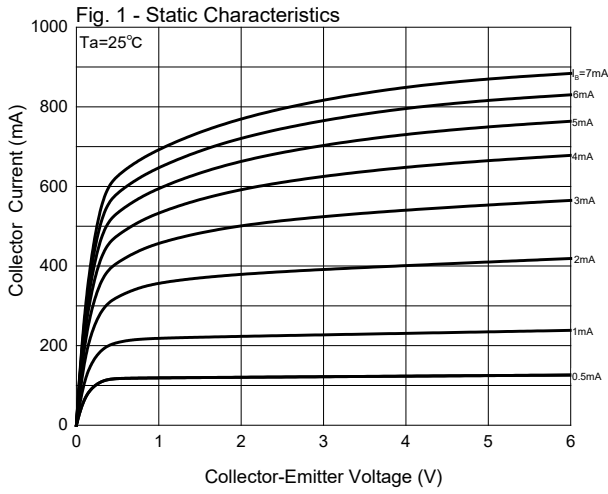
**Marking Code**



**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	50			V	$I_C=100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	50			V	$I_C=2mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6			V	$I_E=100\mu A, I_C=0$
Collector-Base Cutoff Current	$I_{CBO}$			100	nA	$V_{CB}=35V, I_E=0$
Emitter-Base Cutoff Current	$I_{EBO}$			100	nA	$V_{EB}=6V, I_C=0$
Base-Emitter Voltage	$V_{BE}$			1	V	$V_{CE}=1V, I_C=10mA$
DC Current Gain	$h_{FE(1)}$	160		320		$V_{CE}=1V, I_C=100mA$
	$h_{FE(2)}$	40				$V_{CE}=1V, I_C=800mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C=800mA, I_B=80mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.2	V	$I_C=800mA, I_B=80mA$

**Curve Characteristics**



## Ordering Information

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

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