

Features

- 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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	2	A
Power Dissipation	P_D	200	mW

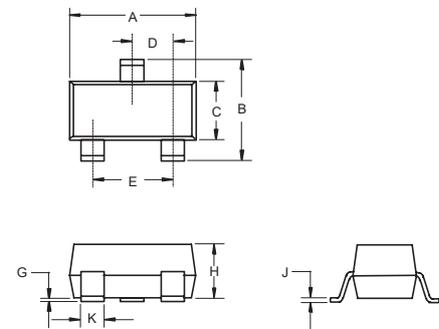
Thermal characteristics

Parameter	Symbol	Rating	Unit
Junction Temperature Range	T_J	-55~+150	°C
Storage Temperature Range	T_{Stg}	-55~+150	°C
Thermal Resistance from Junction to Ambient	$R_{th(J-A)}$	625	°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.

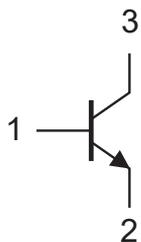
NPN Silicon Planar High Performance Transistor

SOT-23-3L



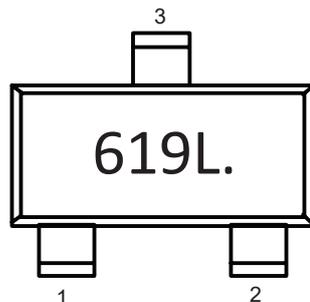
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.113	0.117	2.87	2.97	
B	0.108	0.112	2.75	2.85	
C	0.061	0.065	1.55	1.65	
D	0.036	0.038	0.914	0.965	
E	0.073	0.077	1.85	1.95	
G	0.0016	0.0039	0.04	0.100	
H	0.041	0.045	1.05	1.15	
J	0.006	0.007	0.14	0.17	
K	0.012	0.020	0.30	0.50	

Internal Structure

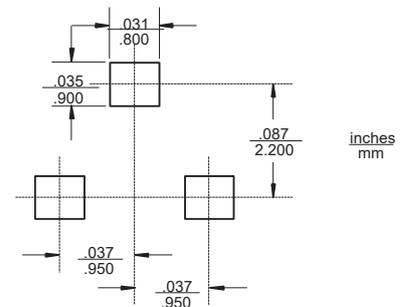


1.BASE
2.EMITTER
3.COLLECTOR

Marking Code



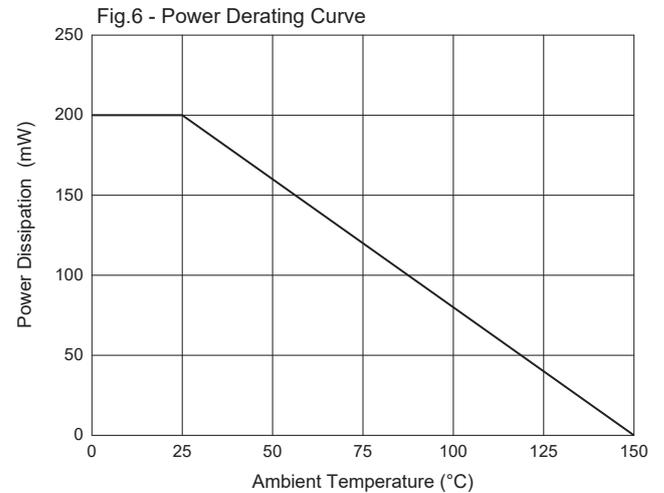
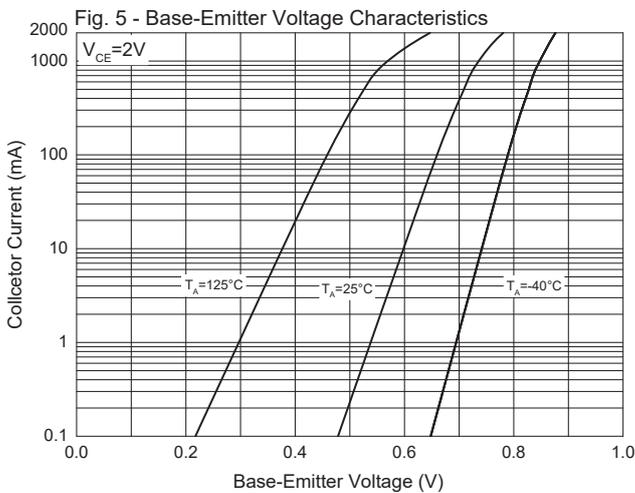
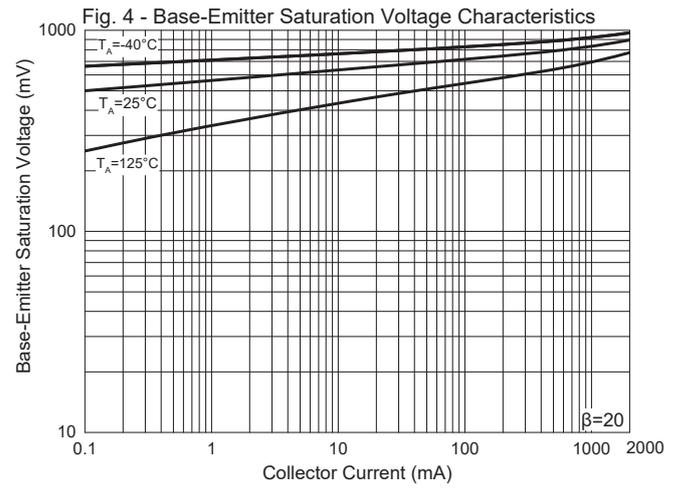
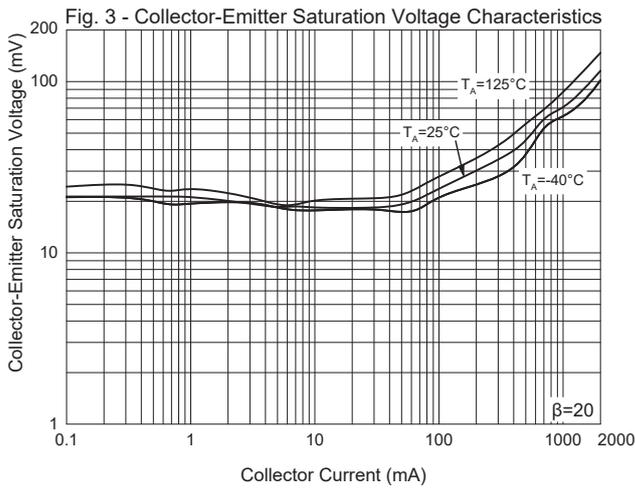
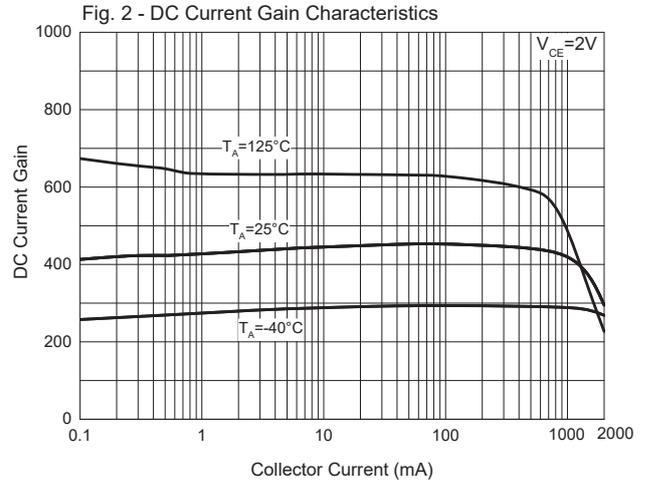
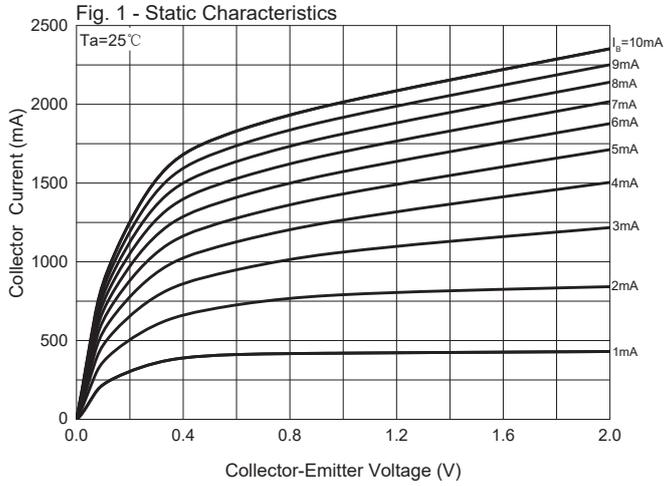
Suggested Solder Pad Layout



Electrical Characteristics @ $T_A=25^\circ\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	50			V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	50			V	$I_C=10\text{mA}$, $I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=100\mu\text{A}$, $I_C=0$
Collector-Base Cutoff Current	I_{CBO}			100	nA	$V_{CB}=40\text{V}$, $I_E=0$
Emitter-Base Cutoff Current	I_{EBO}			100	nA	$V_{EB}=4\text{V}$, $I_C=0$
DC Current Gain	$h_{FE(1)}$	200				$V_{CE}=2\text{V}$, $I_C=10\text{mA}$
	$h_{FE(2)}$	300				$V_{CE}=2\text{V}$, $I_C=200\text{mA}$
	$h_{FE(3)}$	200				$V_{CE}=2\text{V}$, $I_C=1\text{A}$
	$h_{FE(4)}$	100				$V_{CE}=2\text{V}$, $I_C=2\text{A}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)1}$			0.02	V	$I_C=100\text{mA}$, $I_B=10\text{mA}$
	$V_{CE(sat)2}$			0.20	V	$I_C=1\text{A}$, $I_B=10\text{mA}$
	$V_{CE(sat)3}$			0.22	V	$I_C=2\text{A}$, $I_B=100\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.0	V	$I_C=2\text{A}$, $I_B=50\text{mA}$
Base-Emitter Voltage	V_{BE}			1.0	V	$V_{CE}=2\text{V}$, $I_C=2\text{A}$
Transition Frequency	f_T	100			MHz	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$, $f=100\text{MHz}$
Output Capacitance	C_{ob}			20	pF	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$

Curve Characteristics



Ordering Information

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

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