

**Features**

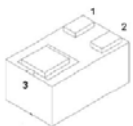
- Ultra-Small Surface Mount Package
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

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

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 1250°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	-80	V
Collector-Emitter Voltage	$V_{CEO}$	-65	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-100	mA
Collector Power Dissipation	$P_C$	100	mW

**Internal Structure**

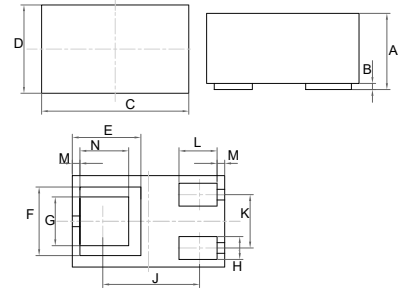


1. BASE
2. EMITTER
3. COLLECTOR

**Marking: D1**

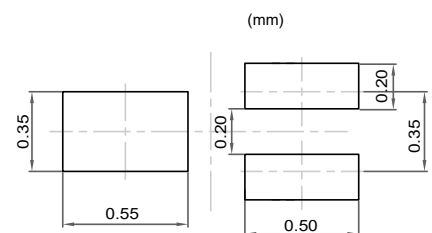
**PNP  
Plastic-Encapsulate  
Transistors**

**SOT-883**



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.45	0.55	
B	0.000	0.004	0.01	0.10	
C	0.037	0.041	0.95	1.05	
D	0.022	0.026	0.55	0.65	
E	0.018		0.450		REF.
F	0.018		0.450		REF.
G	0.011	0.015	0.27	0.37	
H	0.004	0.008	0.10	0.20	
J	0.025		0.635		REF.
K	0.012	0.016	0.30	0.40	
L	0.008	0.012	0.20	0.30	
M	0.002		0.050		REF.
N	0.011	0.015	0.27	0.37	

**Suggested Solder Pad Layout**



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

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-80			V	$I_C = -10\mu A, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-65			V	$I_C = -10mA, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -1\mu A, I_C = 0$
Collector-Base Cutoff Current	$I_{CBO}$			-100	nA	$V_{CB} = -70V, I_E = 0$
Collector-Emitter Cutoff Current	$I_{CEO}$			-100	nA	$V_{CB} = -60V, I_B = 0$
Emitter-Base Cutoff Current	$I_{EBO}$			-100	nA	$V_{EB} = -5V, I_C = 0$
DC Current Gain	$h_{FE}$	220		475		$V_{CE} = -5V, I_C = -2mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.5	V	$I_C = -100mA, I_B = -5mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.1	V	$I_C = -100mA, I_B = -5mA$
Collector Output Capacitance	$C_{ob}$			4.5	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$
Transition Frequency	$f_T$	100			MHz	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$

**Curve Characteristics**

Fig. 1 - Static Characteristics

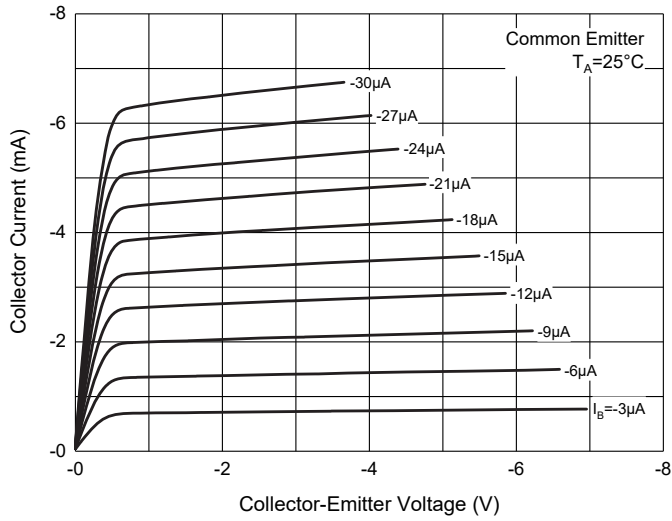


Fig. 2 - DC Current Gain Characteristics

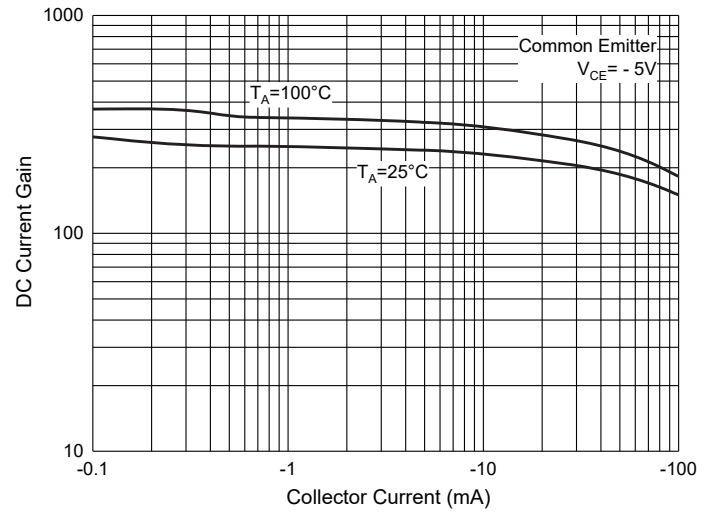


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

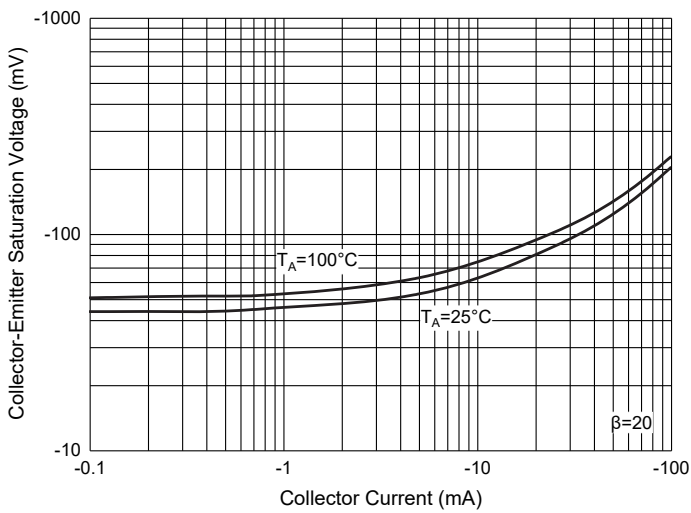


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

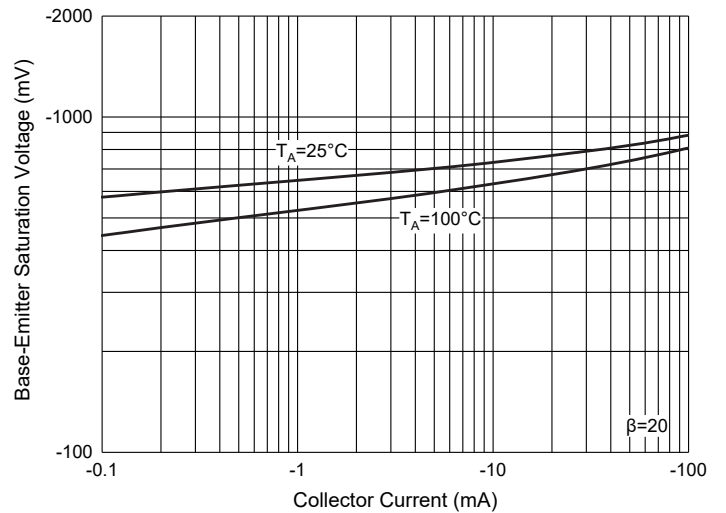


Fig. 5 - Base-Emitter Voltage Characteristics

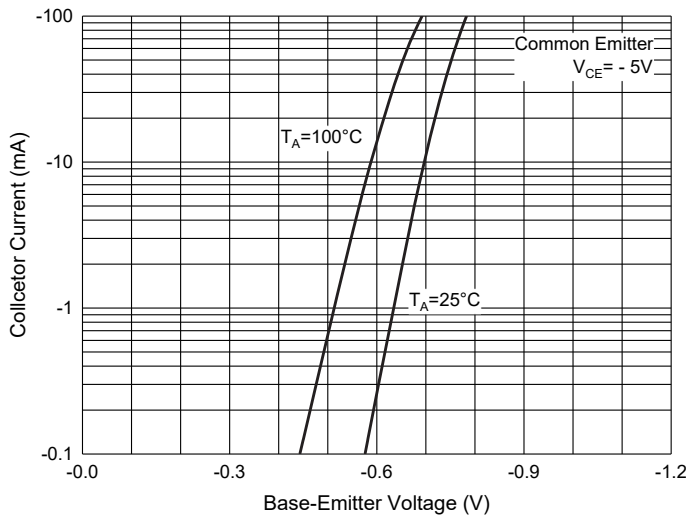
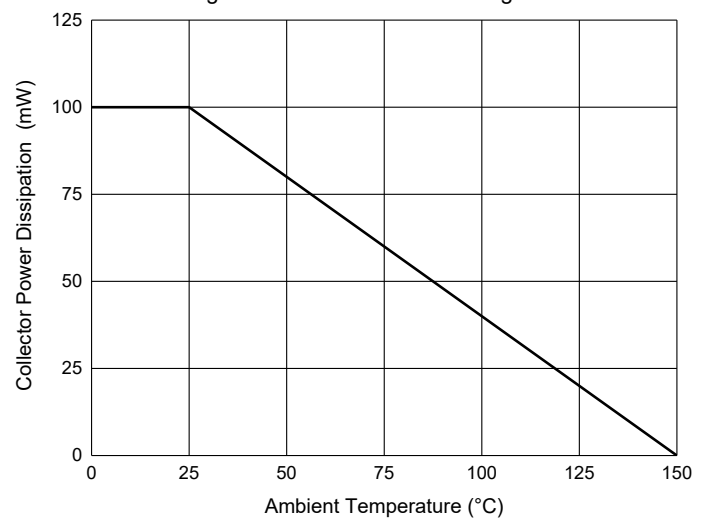


Fig. 6 - Collector Power Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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