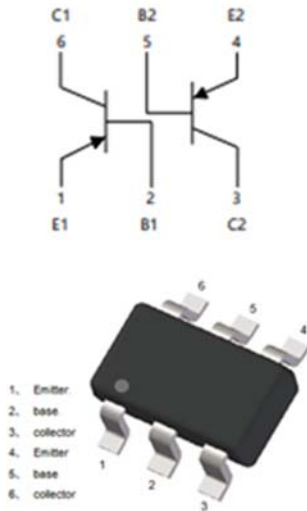


Dual PNP Small Signal Transistor



Features

- Moisture sensitivity level 1
- Halogen Free and RoHS Compliant
- Surface mount package ideally suited for automatic insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package:** SOT-363S
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				T1
Collector-base voltage	V_{CBO}	V	$I_C = -50\mu\text{A}, I_E = 0$	-60
Collector-emitter voltage	V_{CEO}	V	$I_C = -1\text{mA}, I_B = 0$	-50
Emitter-base voltage	V_{EBO}	V	$I_E = -50\mu\text{A}, I_C = 0$	-6
Collector current	I_C	mA		-150
Power dissipation	P_D	mW		200
Operation junction temperature	T_J	$^\circ\text{C}$		-55 to +150
Storage temperature	T_{STG}	$^\circ\text{C}$		-55 to +150



UMT1NS

RoHS
COMPLIANT

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V _{(BR)CBO}	V	I _C = -50μA, I _E = 0	-60		
Collector-emitter breakdown voltage	V _{(BR)CEO}	V	I _C = -1mA, I _B = 0	-50		
Emitter-base breakdown voltage	V _{(BR)EBO}	V	I _E = -50μA, I _C = 0	-6		
Collector cut-off current	I _{CBO}	nA	V _{CB} = -60V, I _B = 0			-100
Emitter-base cutoff current	I _{EBO}	nA	V _{EB} = -6V, I _C = 0			-100
DC current gain	h _{FE}		V _{CE} = -6V, I _C = -1mA	120		560
Collector-emitter saturation voltage	V _{CE(sat)}	V	I _C = -50mA, I _B = -5mA			-0.5
Transition frequency	f _T	MHz	V _{CE} = -12V, I _C = -2mA, f = 100MHz		140	
Output capacitance	C _{ob}	pF	V _{CB} = -12V, I _E = 0A, f = 1MHz			5

■ Thermal Characteristics

PARAMETER	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	625
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	500

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint

■ Characteristics

Fig 1: Static Characteristics

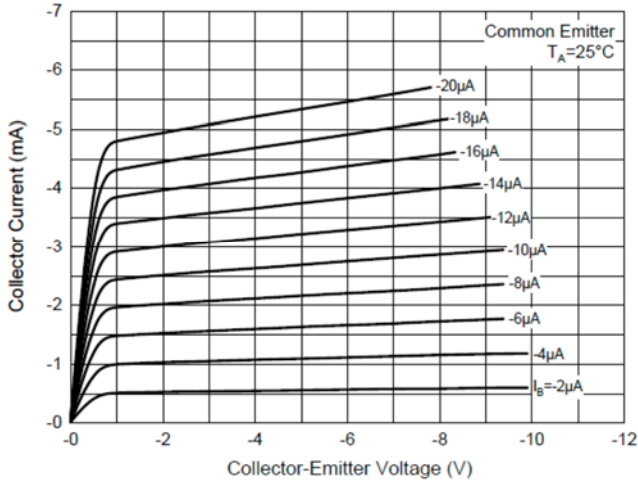


Fig 2: DC Current Gain Characteristics

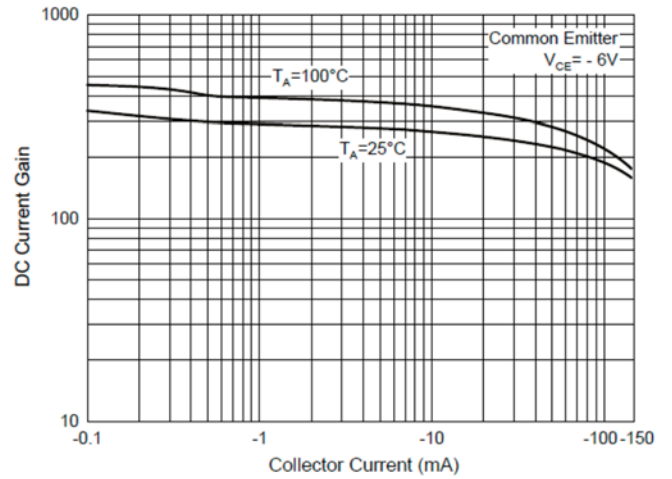


Fig 3: Collector-Emitter Saturation Voltage

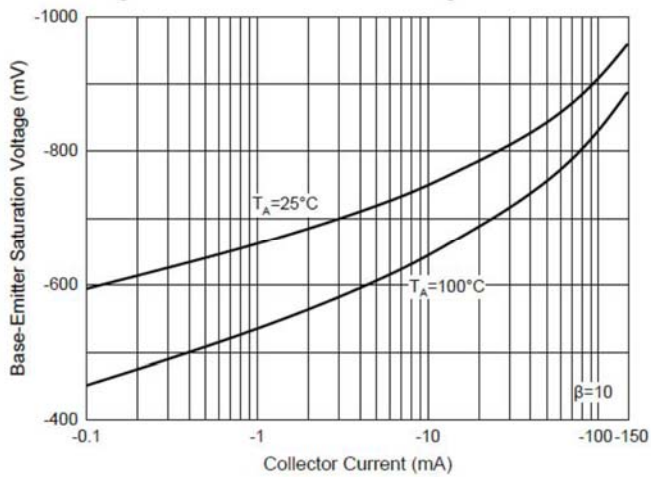


Fig 4: Base-Emitter Saturation Voltage

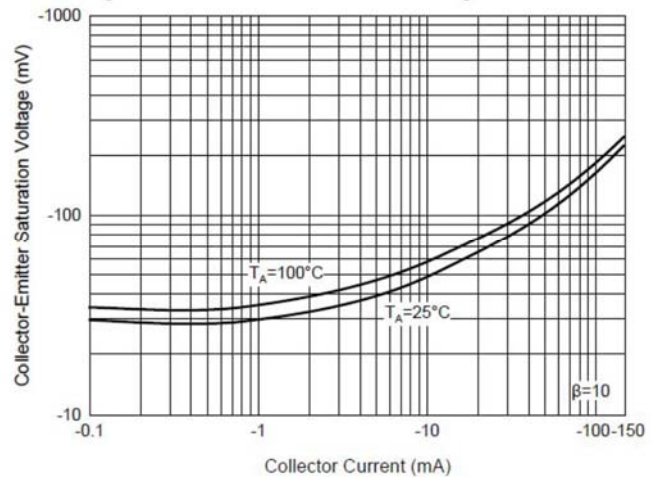


Fig 5: Base-emitter Voltage Characteristics

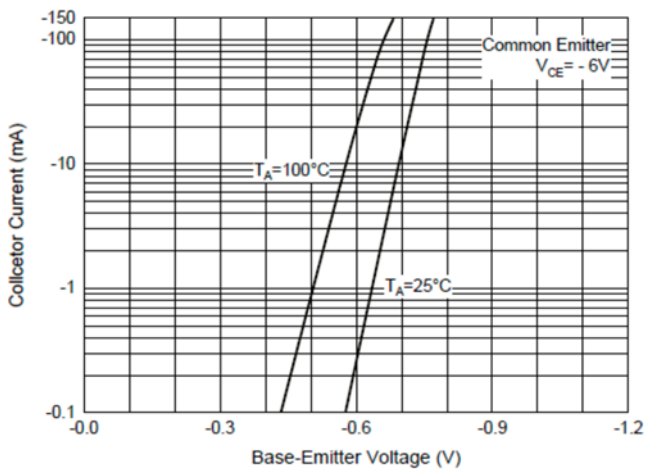
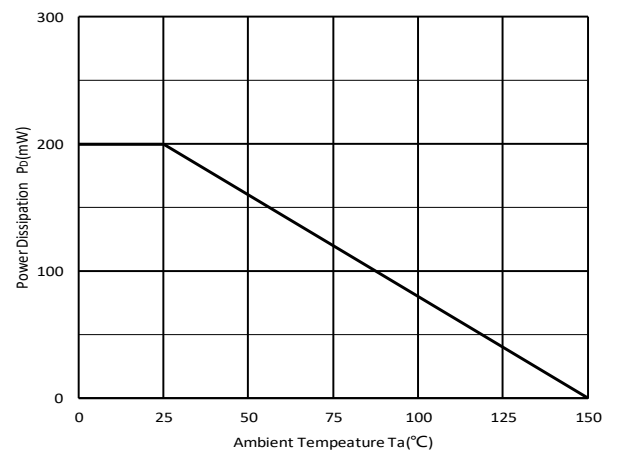


Fig 6: P_D-T_a Curve





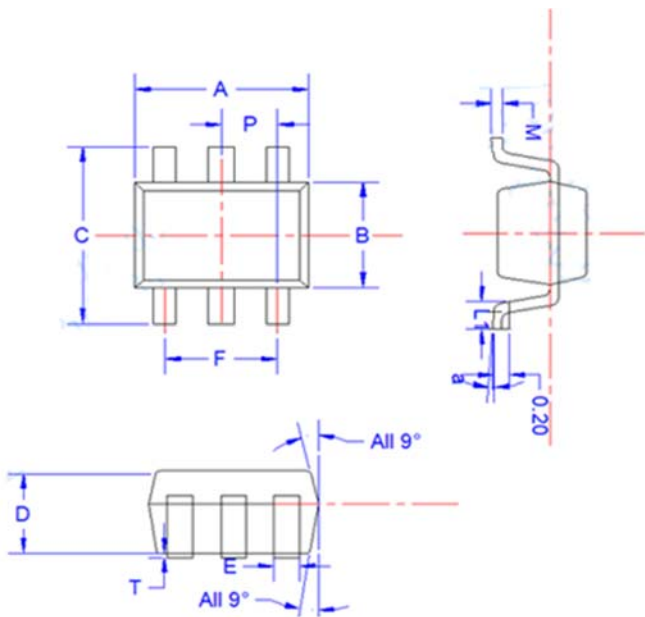
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■ Ordering Information

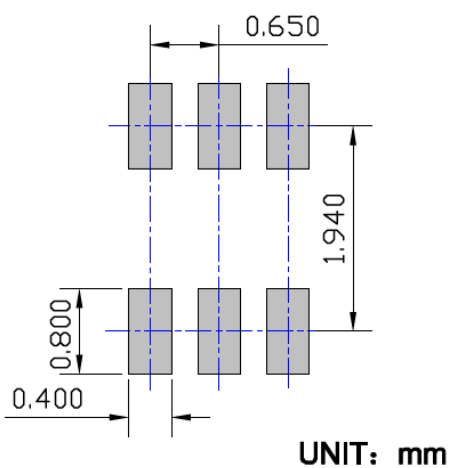
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
UMT1NS	F2	Approximate 0.009	3000	30000	120000	7" reel
UMT1NS	F3	Approximate 0.009	10000	/	210000	7" reel

■ Outline Dimensions



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
E	0.15	0.25	0.35
B	1.15	1.25	1.35
C	2.00	2.10	2.20
P	0.650BSC		
A	1.80	2.00	2.20
T	0.00	0.05	0.100
D	0.90	0.95	1.00
L1	0.20	0.30	0.40
a	4°±4°		
M	0.10	0.15	0.25

■ Suggested Pad Layout





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