

PNP EPITAXIAL PLANAR TRANSISTOR

 Lead(Pb)-Free

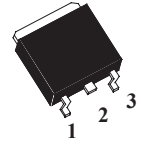
Features:

- * Low $V_{CE(sat)} = -0.55(\text{Typ.}) (I_C/I_B = -4A/-0.1A)$
- * Excellent DC Current Gain Characteristics

Mechanical Data:

- * Case : Molded Plastic
- * Weight : 0.925 grams

1.BASE
2.COLLECTOR
3.EMITTER



D-PAK(TO-252)

ABSOLUTE MAXIMUM RATINGS($T_A = 25^\circ\text{C}$)

Rating	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	-30	V
Collector to Emitter Voltage	V_{CEO}	-20	V
Collector to Base Voltage	V_{EBO}	-6	V
Collector Current	$I_C(\text{DC})$	-5	A
	$I_C(\text{Pulse})$	-10	
Total Device Dissipation $T_C = 25^\circ\text{C}$	P_D	20	W
Junction Temperature	T_j	+150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Device Marking

WTD1386 = 1386

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage $I_C = -50\mu A, I_E = 0$	BV_{CBO}	-30	-	-	V
Collector-Emitter Breakdown Voltage $I_C = -1 mA, I_B = 0$	BV_{CEO}	-20	-	-	V
Emitter-Base Breakdown Voltage $I_E = -50\mu A, I_C = 0$	BV_{EBO}	-6	-	-	V
Collector Cut-Off Current $V_{CB} = -20V, I_E = 0$	I_{CBO}	-	-	-500	nA
Emitter-Cut-Off Current $V_{EB} = -5V, I_C = 0$	I_{EBO}	-	-	-500	nA

ON CHARACTERISTICS¹

DC Current Gain $V_{CE} = -2V, I_C = -0.5A$	h_{FE}	82	-	580	-
Collector-Emitter Saturation Voltage $I_C = -4A, I_B = -0.1A$	$V_{CE(sat)}$	-	-	-1.0	V

Note 1. Pulse Test : Pulse width $\leq 380\mu s$, Duty cycle $\leq 2\%$.

DYNAMIC CHARACTERISTICS

Transition Frequency $V_{CE} = -6V, I_E = 50mA, f = 30MHz$	f_T	-	120	-	MHz
Output Capacitance $V_{CB} = -20V, I_E = 0, f = 1MHz$	C_{ob}	-	60	-	pF

CLASSIFICATION OF h_{FE}

Rank	P	Q	R	E
Range	82 - 180	120 - 270	180 - 390	370 - 580

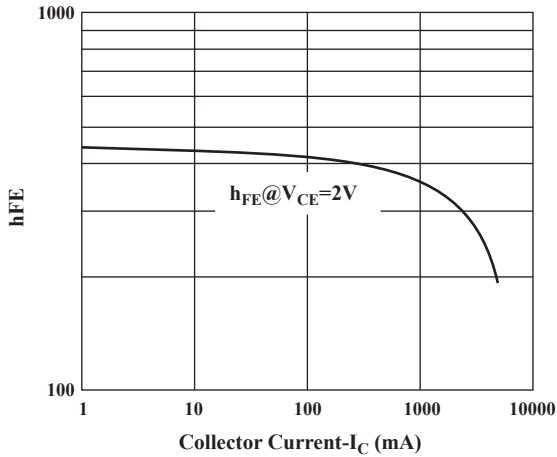


Fig.1 Current Gain & Collector Current

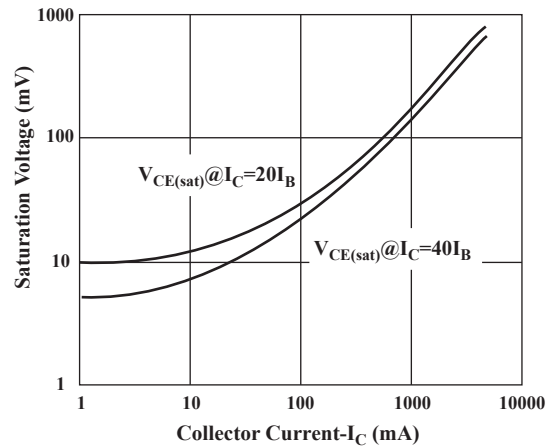


Fig.2 Saturation Voltage & Collector Current

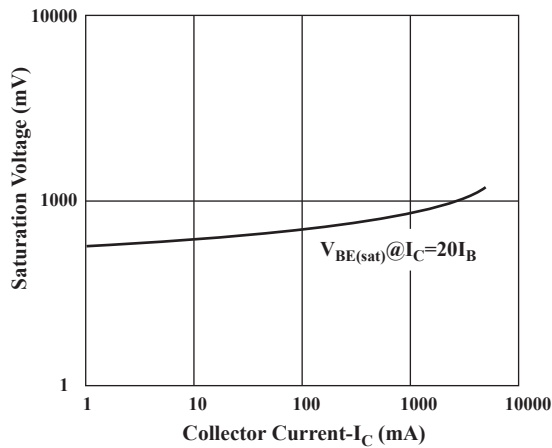


Fig.3 Saturation Voltage & Collector Current

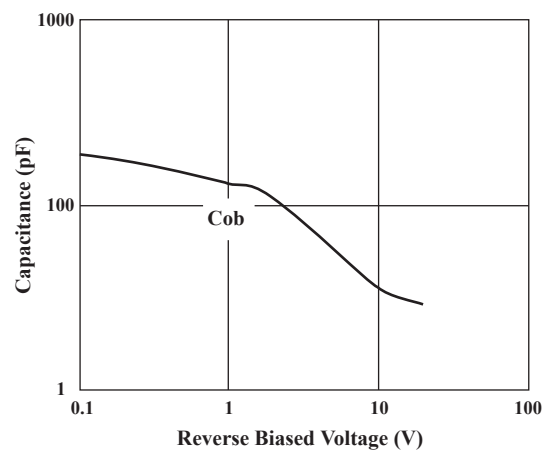


Fig.4 Capacitance & Reverse-Biased Voltage

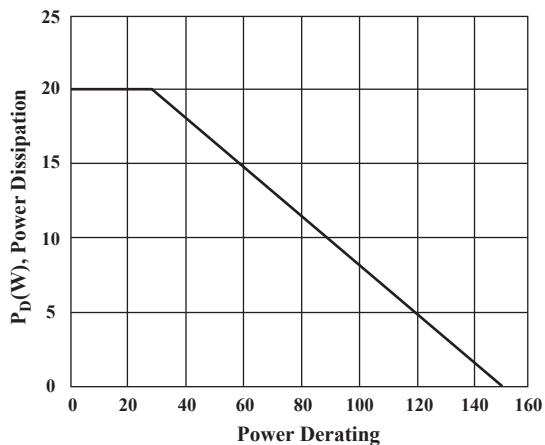


Fig.5 $T_C(^{\circ}C)$, Ambient Temperature

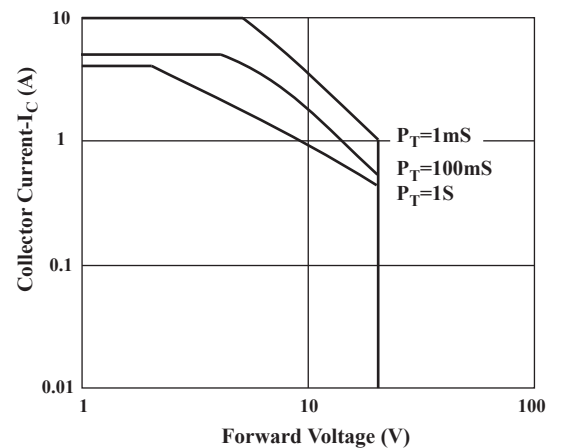
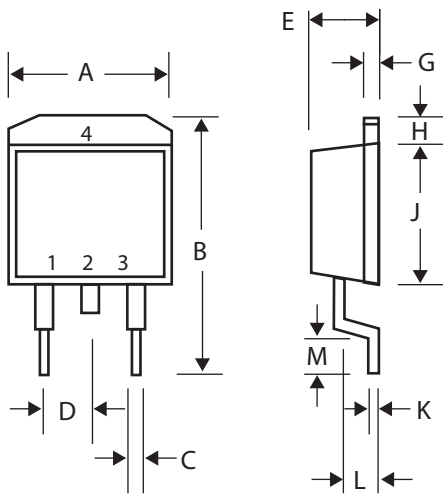


Fig.6 Safe Operating Area

TO-252 Outline Dimensions

unit:mm



TO-252		
Dim	Min	Max
A	6.40	6.80
B	9.00	10.00
C	0.50	0.80
D	-	2.30
E	2.20	2.50
G	0.45	0.55
H	1.00	1.60
J	5.40	5.80
K	0.30	0.64
L	0.70	1.70
M	0.90	1.50