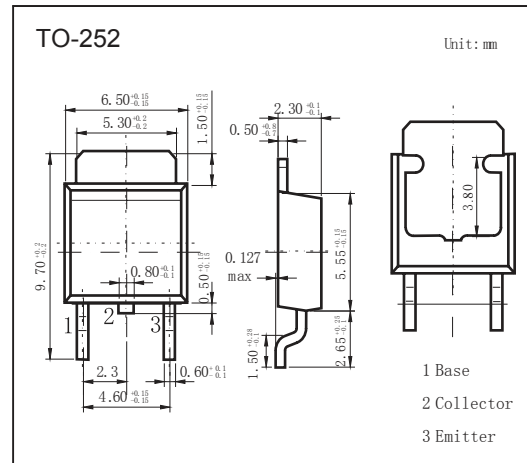


PNP Transistors

2SA1413-Z



Features

- High Voltage: $V_{CE0} = -600V$
- High Speed : $t_r \leq 1\mu s$
- Complement to 2SC3632-Z

Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-600	V
Collector - Emitter Voltage	V_{CEO}	-600	
Emitter - Base Voltage	V_{EBO}	-7	
Collector Current - Continuous	I_C	-1	A
Collector Current - Pulse (Note.1)	I_{CP}	-2	
Collector Power Dissipation	P_C	2	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature range	T_{stg}	-55 to 150	

Note.1: $PW \leq 10ms, Duty Cycle \leq 5\%$

Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = -100 \mu A, I_E = 0$	-600			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -1 mA, I_B = 0$	-600			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -100 \mu A, I_C = 0$	-7			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -600 V, I_E = 0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -7V, I_C = 0$			-10	
Collector-emitter saturation voltage (Note.1)	$V_{CE(sat)}$	$I_C = -300 mA, I_B = -60mA$		-0.28	-1	V
Base - emitter saturation voltage (Note.1)	$V_{BE(sat)}$	$I_C = -300 mA, I_B = -60mA$		-0.85	-1.2	
DC current gain (Note.1)	$h_{FE(1)}$	$V_{CE} = -5V, I_C = -100mA$	30	58	120	
	$h_{FE(2)}$	$V_{CE} = -5V, I_C = -500mA$	5	19		
Turn-on time	t_{on}	$V_{CC} = -250V, I_C = -0.5A, I_{B1} = -I_{B2} = -0.1A, R_L = 500\Omega$		0.1	0.5	μs
Storage time	t_{stg}			3.5	5	
Turn-off time	t_{off}			0.08	0.5	
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		42		pF
Transition frequency	f_T	$V_{CE} = -10V, I_E = 50mA$		28		MHz

Note.1 : Pulsed: $PW \leq 350\mu s, Duty Cycle \leq 2\%$

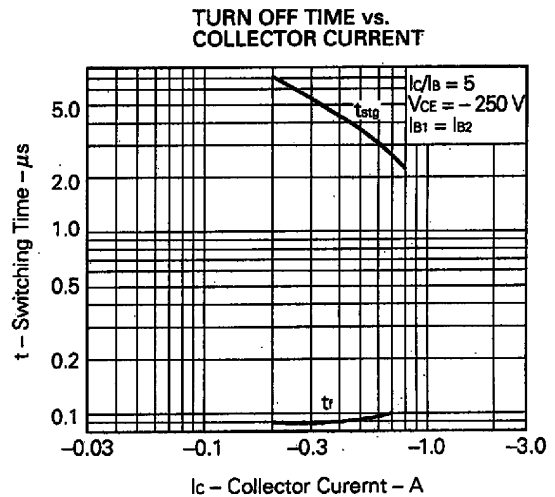
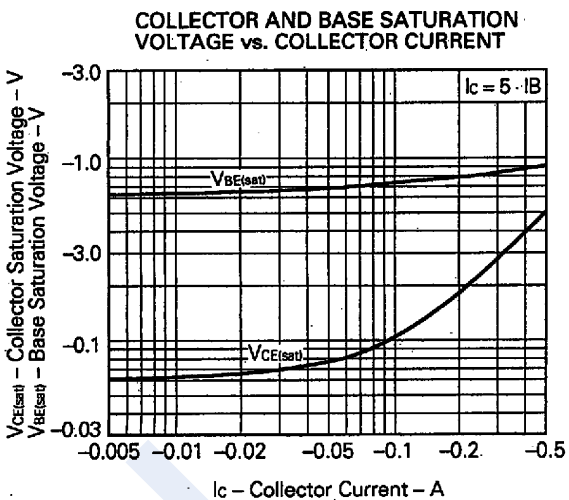
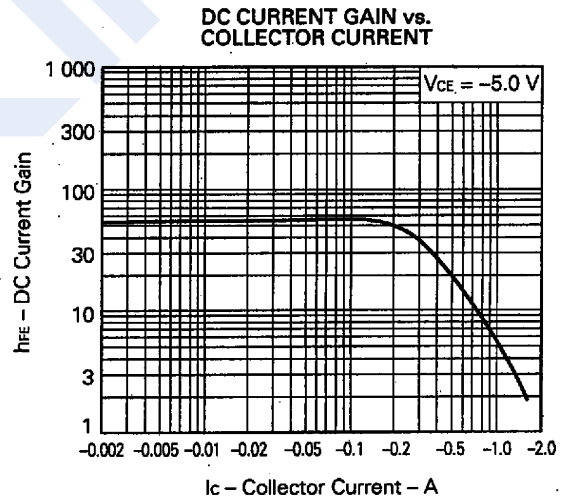
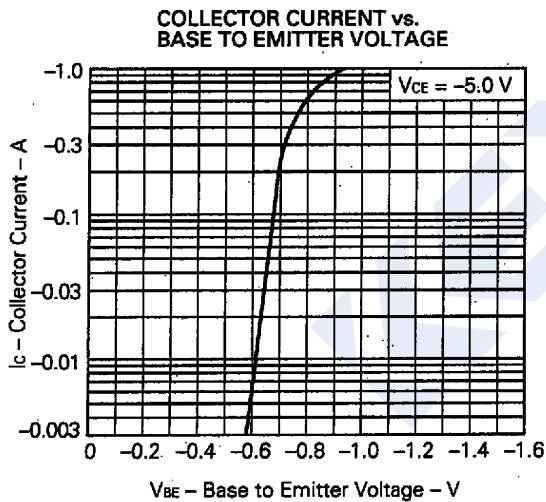
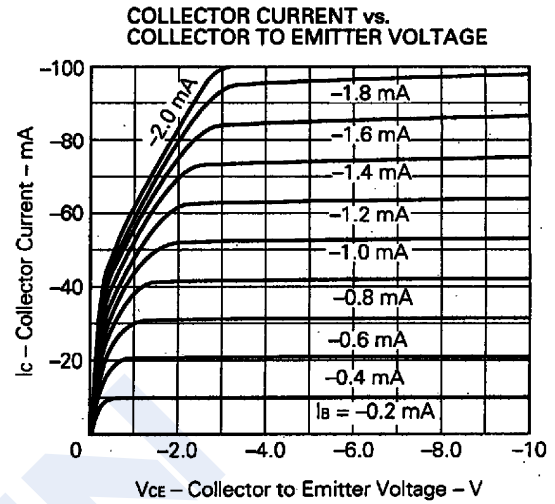
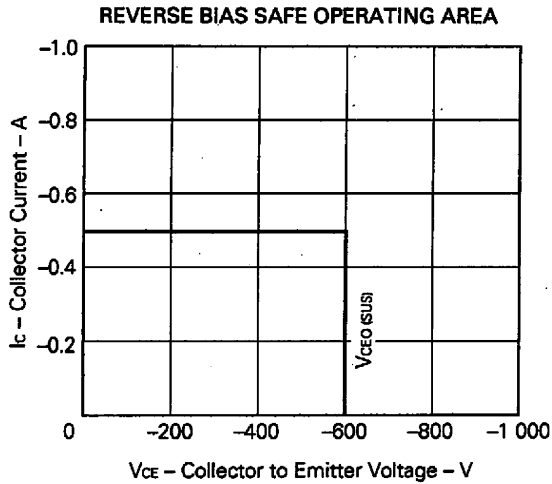
Classification of $h_{FE(1)}$

Type	2SA1413-Z-M	2SA1413-Z-L	2SA1413-Z-K
Range	30-60	40-80	60-120
Marking	**M	**L	**K

PNP Transistors

2SA1413-Z

■ Typical Characteristics



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2SA1413-Z

■ Typical Characteristics

