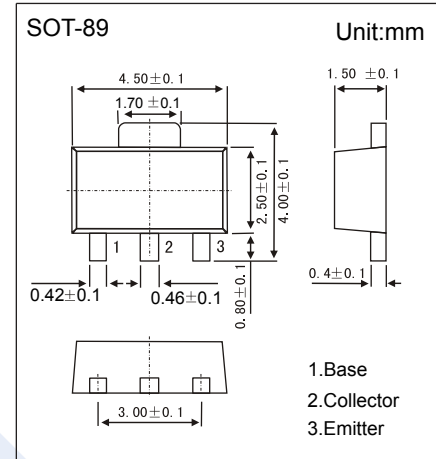


NPN Transistors

2SD1628

■ Features

- Collector Current Capability $I_C=5A$
- Collector Emitter Voltage $V_{CEO}=20V$



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	60	V
Collector - Emitter Voltage	V_{CE0}	20	
Emitter - Base Voltage	V_{EB0}	6	
Collector Current - Continuous	I_C	5	A
Collector Current - Pulse	I_{CP}	8	
Collector Power Dissipation (Note.1)	P_C	0.5	W
		1.5	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1 : Mounted on ceramic substrate of $250mm^2 \times 0.8mm$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu A, I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 mA, I_B = 0$	20			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu A, I_C = 0$	6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 50 V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3 A, I_B = 60 mA$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3 A, I_B = 60 mA$			1.5	
DC current gain	h_{FE}	$V_{CE} = 2V, I_C = 500 mA$	120		560	
		$V_{CE} = 2V, I_C = 3 A$	95			
Turn-on time	t_{on}	See Specified Test Circuit		30		ns
Storage time	t_{stg}			300		
Fall time	t_f			40		
Collector output capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$		45		pF
Transition frequency	f_T	$V_{CE} = 10V, I_C = 50mA$		120		MHz

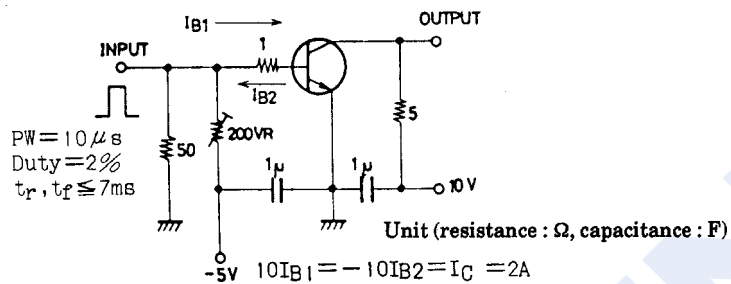
NPN Transistors

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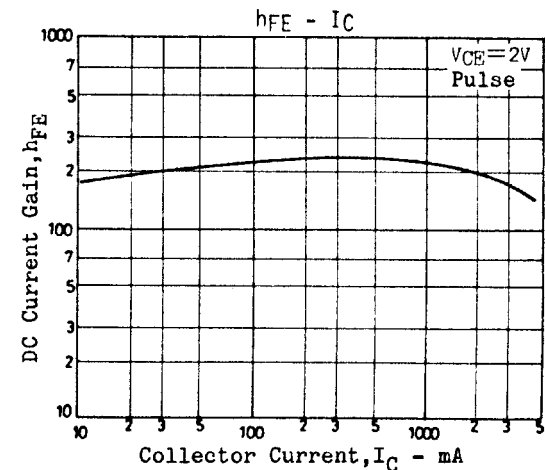
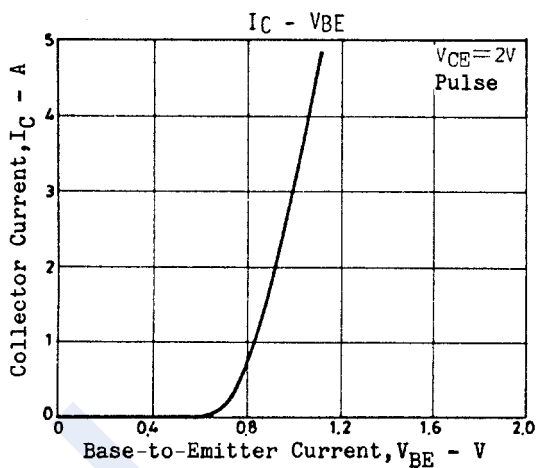
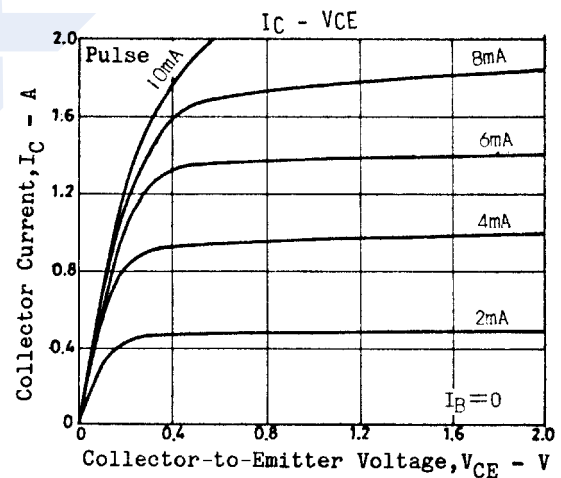
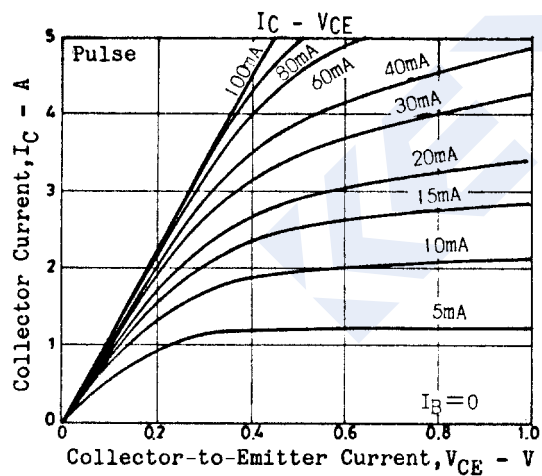
■ Classification of $h_{fe}(1)$

Type	2SD1628-E	2SD1628-F	2SD1628-G
Range	120-200	160-320	280-560
Marking	DK E*	DK F*	DK G*

Switching Time Test Circuit



■ Typical Characteristics

 $f_T - I_C$ $C_{ob} - V_{CB}$

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■ Typical Characteristics

