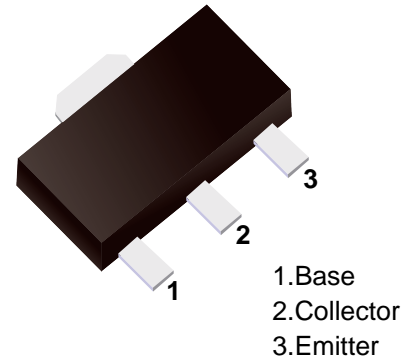


■ NPN Transistors

■ Features

- Collector Current Capability $I_C=5A$
- Collector Emitter Voltage $V_{CE0}=20V$



■ Simplified outline(SOT-89)

■ 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 250mm²X0.8mm

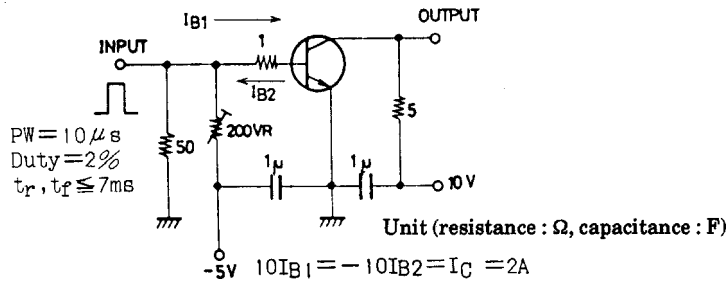
■ Electrical Characteristics $T_a = 25^\circ C$

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	uA
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}	$V_{CB} = 10V, f = 1 MHz$		45		pF
Transition frequency	f_T	$V_{CE} = 10V, I_C = 50 mA$		120		MHz

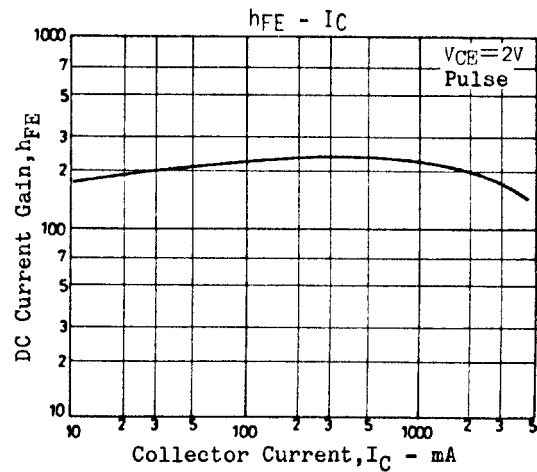
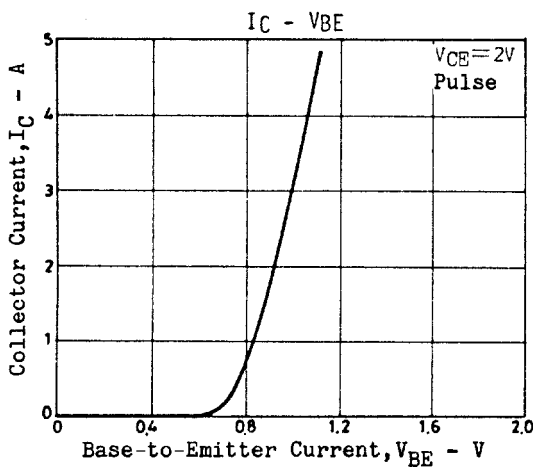
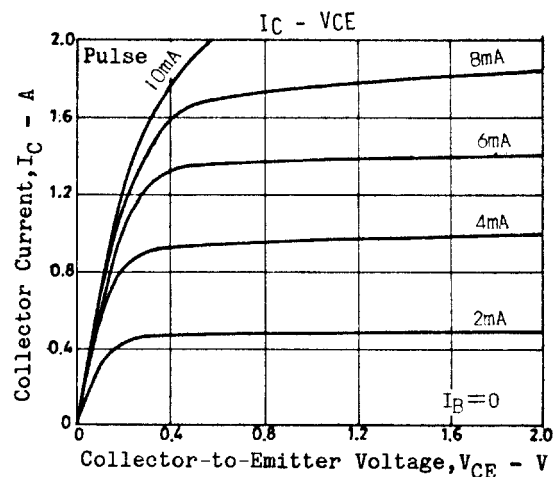
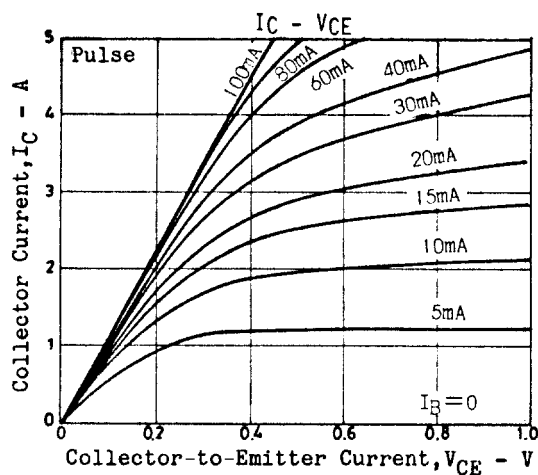
■ Classification of hfe(1)

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



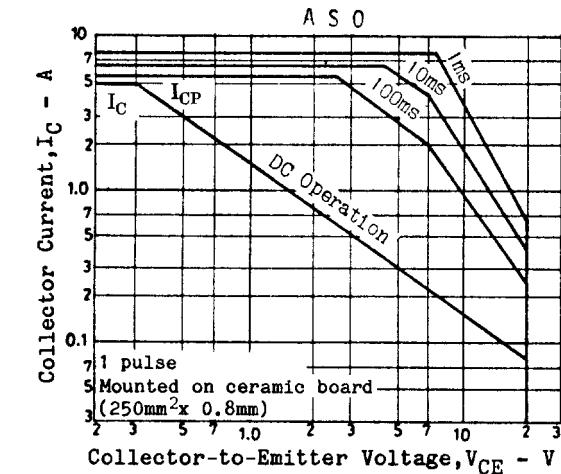
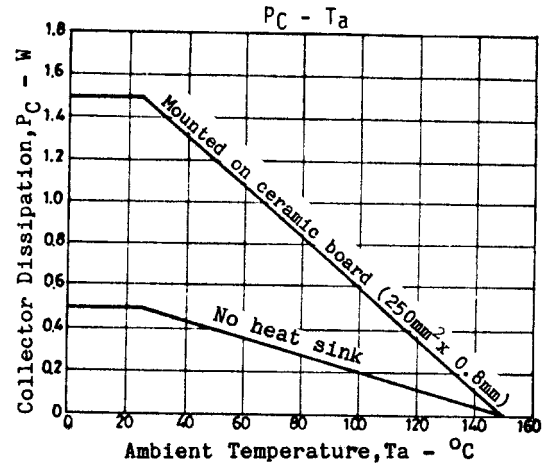
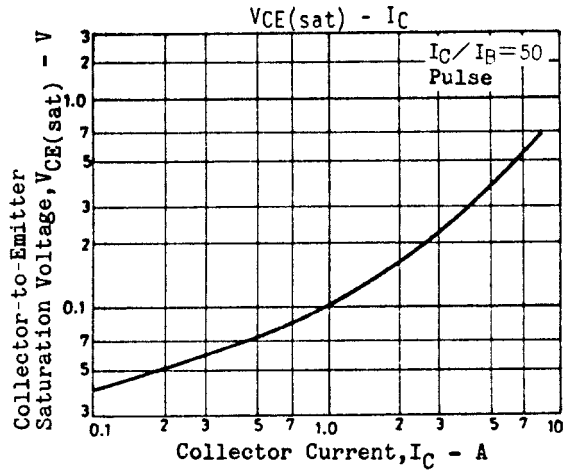
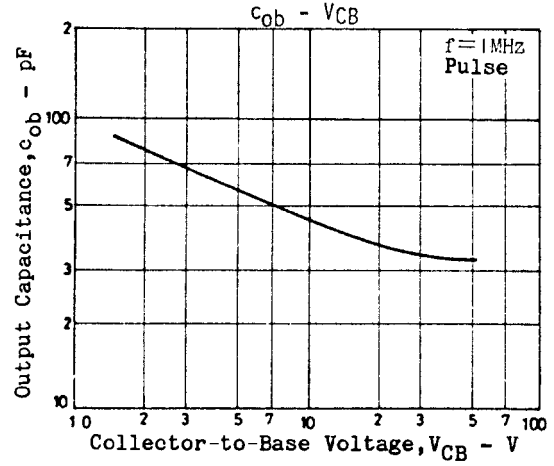
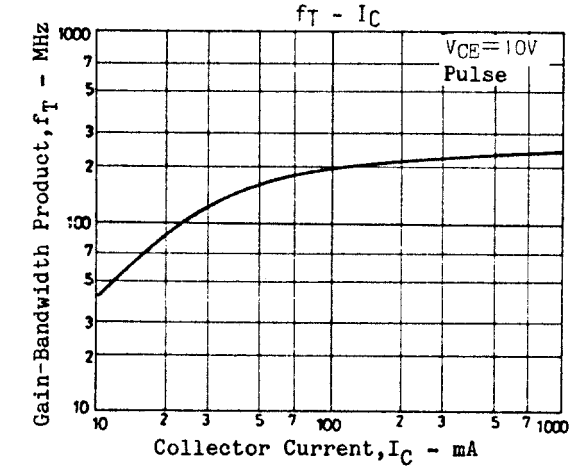
■ Typical Characteristics

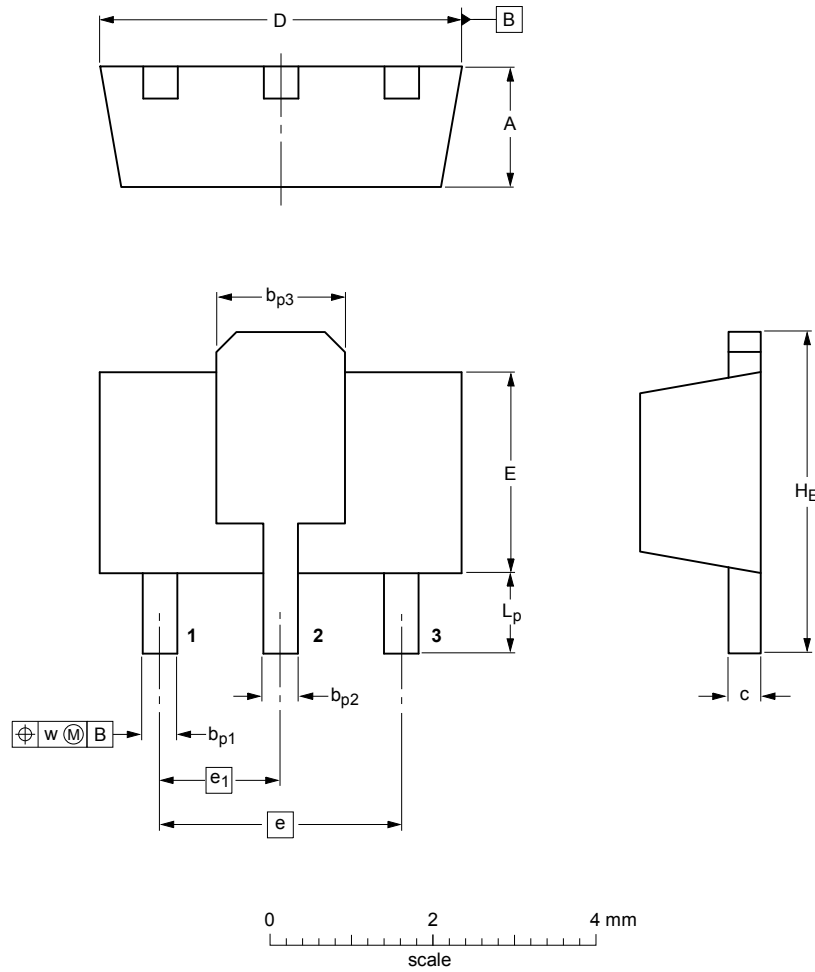


$f_T - I_C$

$C_{ob} - V_{CB}$

■ Typical Characteristics





DIMENSIONS (mm are the original dimensions)

UNIT	A	b _{p1}	b _{p2}	b _{p3}	c	D	E	e	e ₁	H _E	L _p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-89	Tape/Reel, 7" reel	1000	EIA-481-1

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