



2SD1628

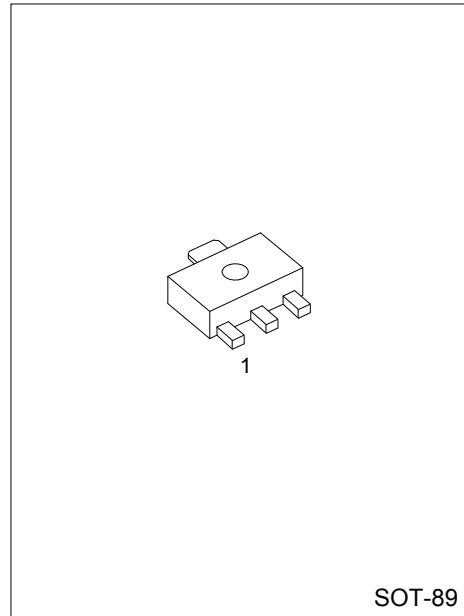
Preliminary

NPN SILICON TRANSISTOR

HIGH-CURRENT SWITCHING APPLICATIONS

■ FEATURES

- * Low saturation voltage.
- * High h_{FE} .
- * Large current capacity.



Lead-free: 2SD1628L
 Halogen-free: 2SD1628G

■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
2SD1628-x-AB3-R	2SD1628L-x-AB3-R	2SD1628G-x-AB3-R	SOT-89	B	C	E	Tape Reel

<p>2SD1628L-x-AB3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Plating</p>	<p>(1) R: Tape Reel (2) AB3: SOT-89 (3) x: refer to Classification of h_{FE1} (4) G: Halogen Free, L: Lead Free Plating, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT	
Collector-Base Voltage	V_{CBO}	60	V	
Collector-Emitter Voltage	V_{CEO}	20	V	
Emitter-Base Voltage	V_{EBO}	6	V	
Collector Current	DC	I_C	5	A
	Pulse	I_{CP}	8	A
Collector Dissipation	P_C	0.5	W	
Junction Temperature	T_J	150	°C	
Storage Temperature	T_{STG}	-55~+150	°C	

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

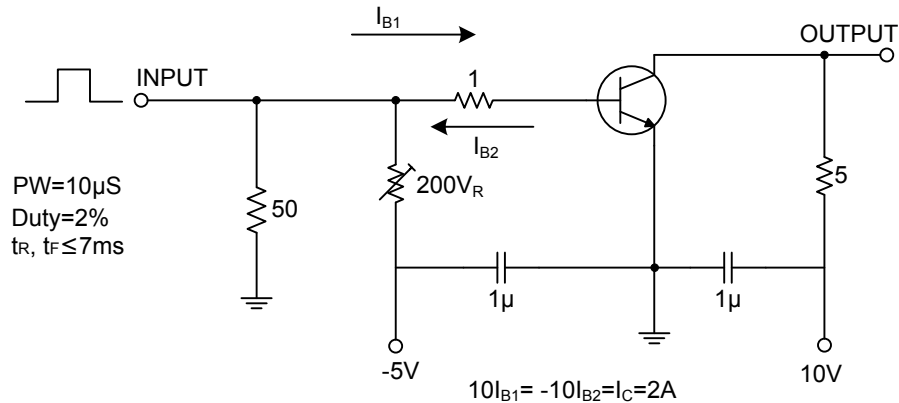
■ ELECTRICAL CHARACTERISTICS (Ta= 25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 3A, I_B = 60mA$			500	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 3A, I_B = 60mA$			1.5	V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 50V, I_E = 0$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			100	nA
DC Current Gain	h_{FE1}	$V_{CE} = 2V, I_C = 0.5A$	120		560	
	h_{FE2}	$V_{CE} = 2V, I_C = 3A$	95			
Output Capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$		45		pF
Transition Frequency	f_T	$V_{CE} = 10V, I_C = 50mA$		120		MHz
Turn On Time	t_{ON}	See specified Test circuit		30		ns
Storage Time	t_S			300		ns
Fall Time	t_F			40		ns

■ CLASSIFICATION OF h_{FE1}

RANK	E	F	G
RANGE	120 ~ 200	160 ~ 320	280 ~ 560

■ SWITCHING TIME TEST CIRCUIT



Unit (Resistance: Ω , Capacitance:F)

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