#### Continued from preceding page.

Parameter	Symbol	Conditions	Ratings	Unit
Collector Discination	Pc		500	mW
Collector Dissipation	PC	When mounted on ceramic substrate (250mm <sup>2</sup> x0.8mm)	1.5	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

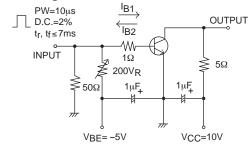
#### Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit	
Parameter	Symbol	Conditions	min	typ	max	Uill	
Collector Cutoff Current	ICBO	V <sub>CB</sub> =50V, I <sub>E</sub> =0A			100	nA	
Emitter Cutoff Current	IEBO	V <sub>EB</sub> =5V, I <sub>C</sub> =0A			100	nA	
DC Current Gain	hFE1	V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A	120*		560*		
	h <sub>FE</sub> 2	V <sub>CE</sub> =2V, I <sub>C</sub> =3A	95				
Gain-Bandwidth Product	fŢ	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA		120		MHz	
Output Capacitance	Cob	V <sub>CB</sub> =10V, f=1MHz		45		pF	
Collector-to-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	IC=3A, IB=60mA			500	mV	
Base-to-Emitter Saturation Voltage	V <sub>BE</sub> (sat)	IC=3A, IB=60mA			1.5	V	
Turn-ON Time	ton			30		ns	
Storage Time	t <sub>stg</sub>	See specified Test Circuit.		300		ns	
Fall Time	t <sub>f</sub>			40		ns	

# $^{\star}$ : The 2SD1628 is classified by 0.5A $h_{\mbox{\scriptsize FE}}$ as follows :

Rank	Е	F	G	
hFE	120 to 200	160 to 320	280 to 560	

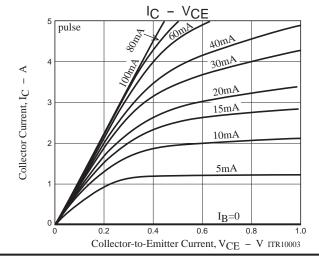
## **Switching Time Test Circuit**

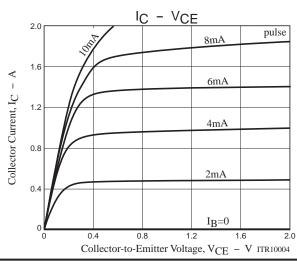


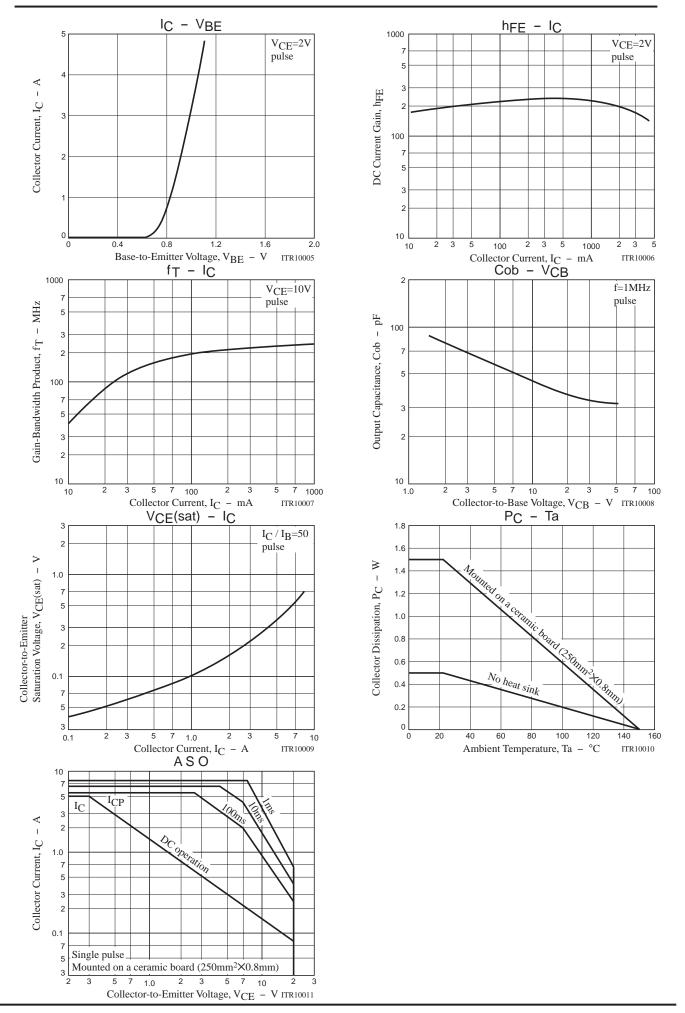
 $I_{C}=10I_{B1}=-10I_{B2}=2A$ 

# **Ordering Information**

Device	Package	Shipping	memo
2SD1628G-TD-E	PCP	1,000pcs./reel	Pb Free
2SD1628G-TD-H			Pb Free and Halogen Free
2SD1628F-TD-E			Pb Free
2SD1628F-TD-H	PCP	1,000pcs./reel	Pb Free and Halogen Free





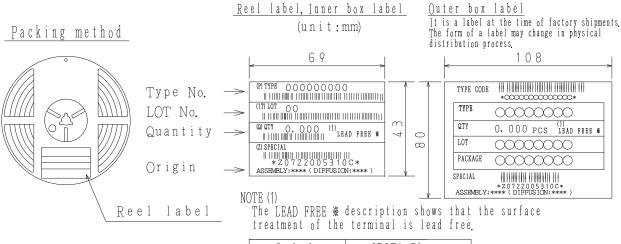


#### **Bag Packing Specification**

#### 2SD1628G-TD-E, 2SD1628G-TD-H, 2SD1628F-TD-E, 2SD1628F-TD-H

## 1. Packing Format

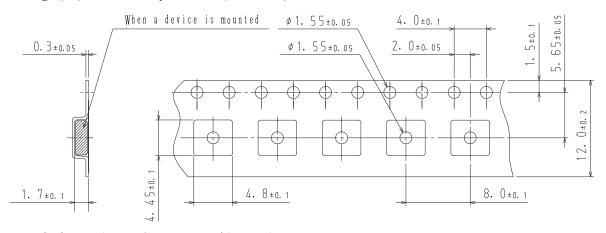
Package Name	Carrier Tape	Maximum Number of devices contained (pcs)			Packing	format
	Туре	Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
PCP	PCP	1, 000	4,000	24,000	4 reels contained	6 inner boxes contained
					Dimensions:mm (external)	Dimensions:mm (external)
					183×72×185	440×195×210



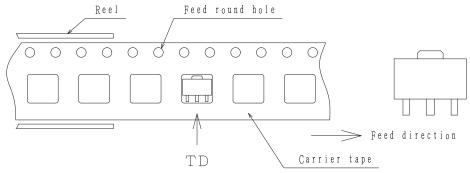
# Label JEITA Phase LEAD FREE 3 JEITA Phase 3A LEAD FREE 4 JEITA Phase 3

## 2. Taping configuration

2-1. Carrier tape size (unit:mm)



2-2. Device placement direction

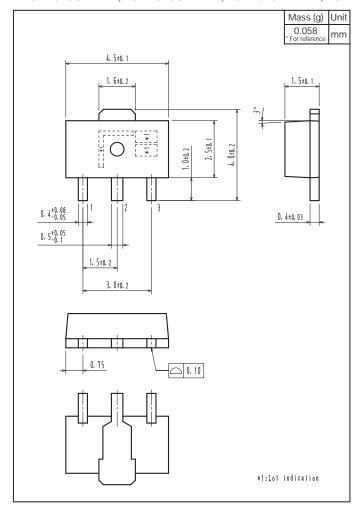


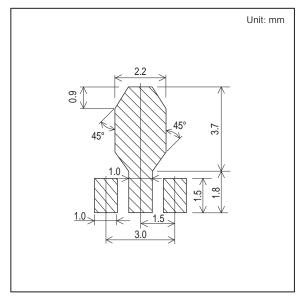
Those with pin 1 index on the feed hole side·····TD

## **Outline Drawing**

## **Land Pattern Example**

2SD1628G-TD-E, 2SD1628G-TD-H, 2SD1628F-TD-E, 2SD1628F-TD-H





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