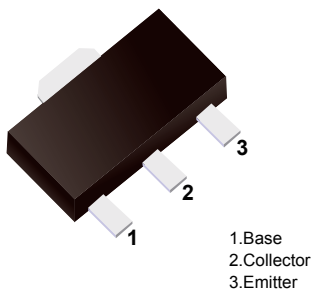


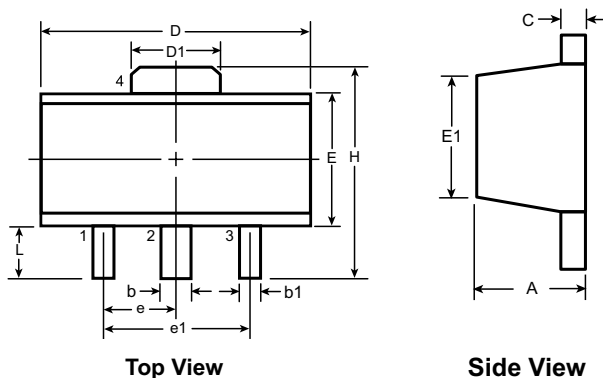
■ Features

- Low Saturation Voltage: $V_{CE(sat)} = -0.5V$ (max) ($I_C = -1A$)
- High Speed Switching Time: $t_{stg} = 1.0\mu s$ (typ.)
- Small Flat Package
- $P_c = 1$ to $2W$ (mounted on ceramic substrate)
- Complementary to 2SC2873



■ Simplified outline(SOT-89)

SOT-89 PACKAGE OUTLINE



Symbol	A	b	b1	C	D	D1	E	E1	e	e1	H	L
Dimensions (mm)	MIN	1.40	0.44	0.36	0.3	4.40	1.50	2.29	2.00'	1.50 BSC	3.94	0.89
	NOM	-	-	-	-	-	-	-	-	3.00 BSC	-	-
	MAX	1.60	0.56	0.48	0.5	4.60	1.75	2.60	2.29	-	4.25	1.20

Dimensions in mm

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-50	V
Collector - Emitter Voltage	V_{CEO}	-50	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-2	A
Base Current - Continuous	I_B	-0.4	
Collector Power Dissipation	P_c	500	mW
Junction Temperature	T_J	150	
Storage Temperature range	T_{stg}	-55 to 150	

2SA1213

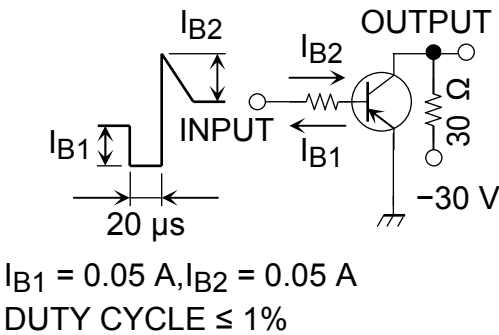
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _C = -100 μA I _E =0	-50			V
Collector- emitter breakdown voltage	V _{CE0}	I _C = -10 mA I _B =0	-50			
Emitter - base breakdown voltage	V _{EB0}	I _E = -100 μA I _C =0	-5			
Collector-base cut-off current	I _{CBO}	V _{CB} = -50 V , I _E =0			-100	nA
Emitter cut-off current	I _{EBO}	V _{EB} = -5V , I _C =0			-100	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-1 A, I _B =- 50mA			-0.5	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C =-1 A, I _B =- 50mA			-1.2	
DC current gain	h _{FE(1)}	V _{CE} = -2V, I _C = -0.5A	70		240	
	h _{FE(2)}	V _{CE} = -2 V, I _C = -2A	20			
Turn-on time	t _{on}	See Test Circuit.		0.1		us
Storage time	t _{stg}			1		
Fall time	t _f			0.1		
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E = 0 ,f=1MHz		40		pF
Transition frequency	f _T	V _{CE} = -2V, I _C = -0.5A		120		MHz

■ Classification of h_{FE(1)}

Type	2SA1213-O	2SA1213-Y
Range	70-140	120-240
Marking	NO	NY

■ Test Circuit



RATING AND CHARACTERISTIC CURVES (2SA1213)

