Ordering number: EN 2018A

SANYO

No.2018A

2SC3807

NPN Epitaxial Planar Silicon Transistor
HIGH h_{FE}, LOW FREQUENCY,
GENERAL-PURPOSE AMP APPLICATIONS

Applications

. Low frequency general-purpose amplifiers, drivers

Features

. Large current capacity (I_C=2A)
. Adoption of MBIT process
. High DC current gain (h_{FE}=800 to 3200)
. Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leqq 0.5V$)
. High V_{EBO} ($V_{EBO} \geqq 15V$)

Absolute Maximum Ratings at Ta=25°C

				unit
Collector to Base Voltage	V_{CBO}		30	V
Collector to Emitter Voltage	V_{CEO}		25	V
Emitter to Base Voltage	V_{EBO}		15	V
Collector Current	I_C		2	A
Peak Collector Current	icp		4	A
Collector Dissipation	Pc		1.2	W
		Tc=25°C	15	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	V_{CB}=20V, I_E=0			0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=10V, I_C=0			0.1	μA
DC Current Gain	$h_{FE}(1)$	V_{CE}=5V, I_C=500mA	800	1500	3200	
	$h_{FE}(2)$	V_{CE}=5V, I_C=1A	600			
Gain-Bandwidth Product	f_T	V_{CE}=10V, I_C=50mA		260		MHz
Output Capacitance	cob	V_{CE}=10V, f=1MHz		27		pF
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=1A, I_B=20mA		0.15	0.5	V
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=1A, I_B=20mA		0.85	1.2	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	30			V

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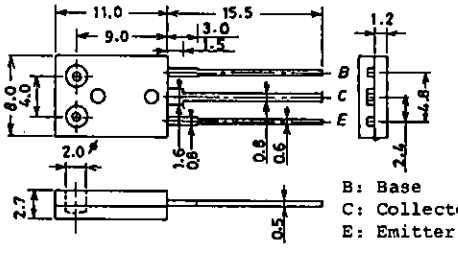
Package Dimensions 2043A
(unit: mm)



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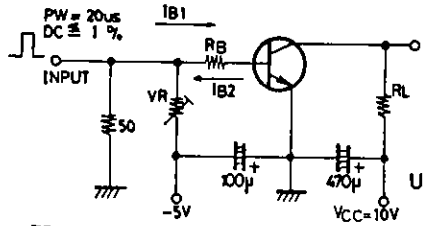
			min	typ	max	unit
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	25			V
Emitter to Base	$V_{(BR)EBO}$	I_E=10uA, I_C=0	15			V
Turn-on time	ton	See specified Test Circuit.		0.14		μs
Storage Temperature	tstg	"		1.35		μs
Fall Time	tf	"		0.1		μs

Switching Time Test Circuit



$7I_{B1} = -7I_{B2} = I_C = 700mA$