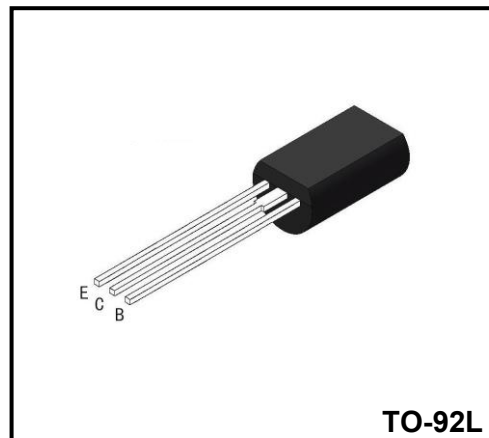


NPN Plastic-Encapsulate Transistors

Color TV Audio Output

Color TV Vertical Deflection Output

♣Complement to 2SA1013



TO-92L

Absolute Maximum Ratings Ta=25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	180	V
Collector-Emitter Voltage	BV_{CEO}	160	V
Emitter-Base Voltage	BV_{EBO}	6	V
Collector Current	I_C	1	A
Collector Power Dissipation	P_C	900	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~150	°C

Electrical Characteristics Ta=25°C unless otherwise noted

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	$I_C = 100\mu A, I_E = 0$	180			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = 1mA, I_B = 0$	160			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = 100\mu A, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 160V, I_E = 0$			1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			1	μA
DC current gain	h_{FE}	$V_{CE} = 5V, I_C = 200mA$	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$			1.5	V
Base-emitter voltage (on)	$V_{BE(on)}$	$V_{CE} = 5V, I_C = 5mA$			0.75	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 200mA$	20			MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$			20	pF

h_{FE} Classification

Classification	2SC2383-R	2SC2383-O	2SC2383-Y
Range	60-120	100-200	160-320

Typical Characteristics

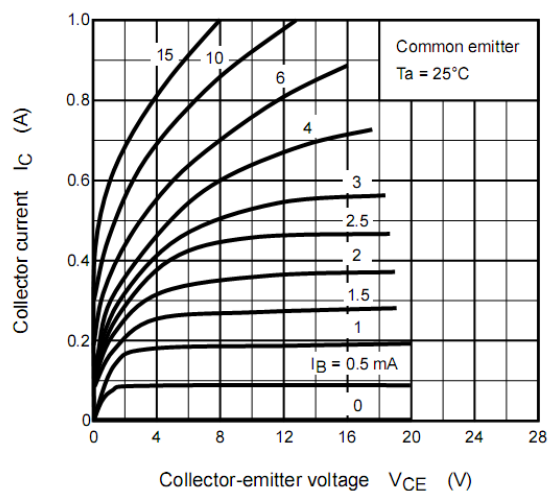


Figure 1. Static Characteristic

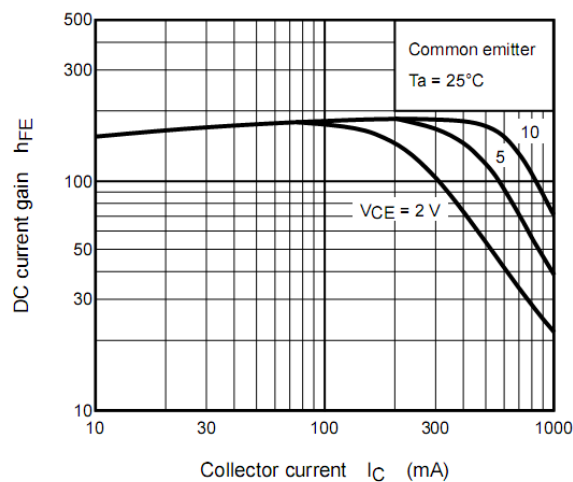


Figure 2. DC current Gain

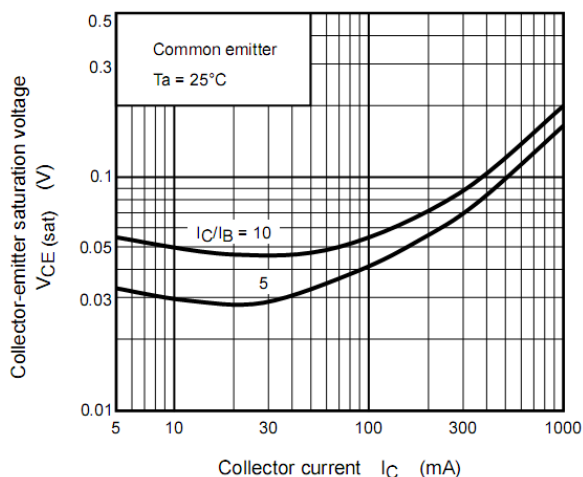


Figure 3. Saturation Voltage

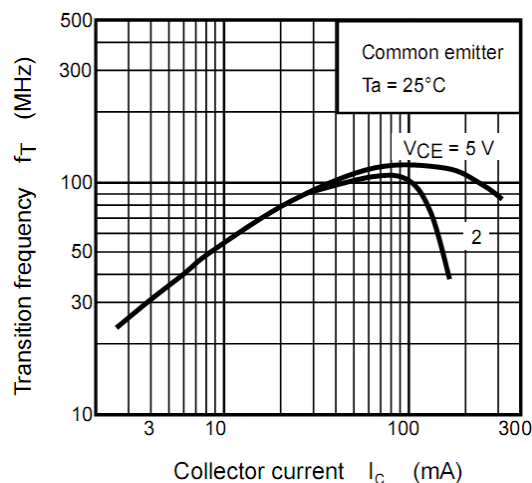


Figure 4. Current Gain Bandwidth Product

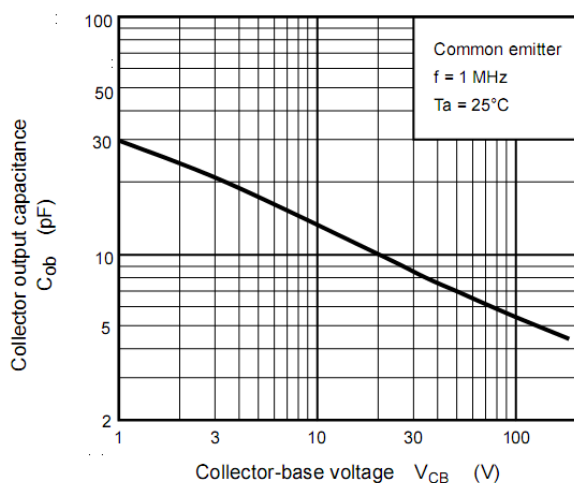


Figure 5. Collector Output Capacitance

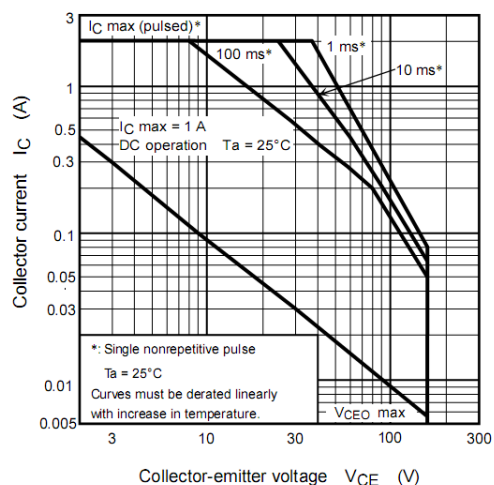


Figure 6. Safe Operating Area

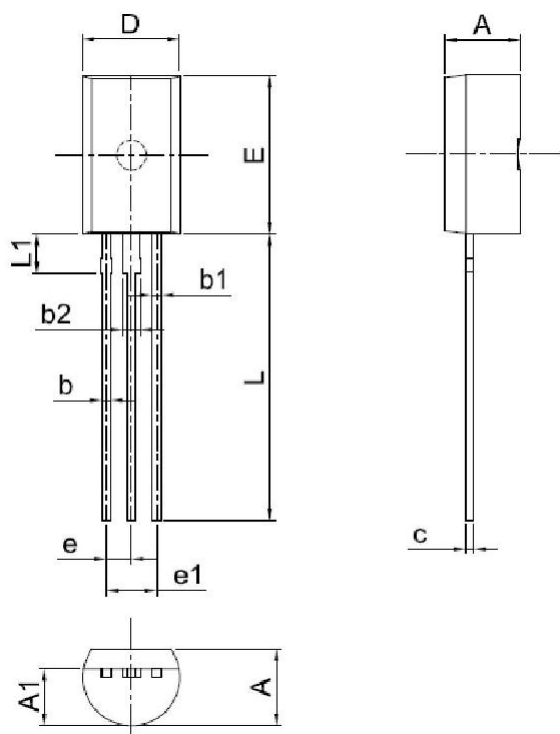
Ordering information

Package	Packing Description	Base Quantity
TO-92L	Bulk	1000pcs/Bag

Package Dimensions

TO-92L

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.60	4.00	0.142	0.157
A1	2.20	2.60	0.087	0.102
B	0.40	0.50	0.016	0.020
B1	0.50	0.65	0.020	0.026
C	0.35	0.45	0.014	0.018
D	4.60	5.00	0.181	0.197
E	7.60	8.00	0.299	0.315
E	1.24	1.30	0.049	0.051
E1	2.48	2.60	0.098	0.102
L	13.50	14.50	0.531	0.571
L1	1.50	1.90	0.059	0.075



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