TSC2411D

General Purpose Dual NPN Transistor

SOT-363

Pin assignment:

1. Emitter 1	6. Collector 1
2. Base 1	5. Base 2
3. Collector 2	4. Emitter 2

BV_{CEO} = 40V

Ic = 600mA

$V_{CE\ (SAT)}$, = 0.2V(typ.) @Ic / Ib = 500mA / 50mA

Features

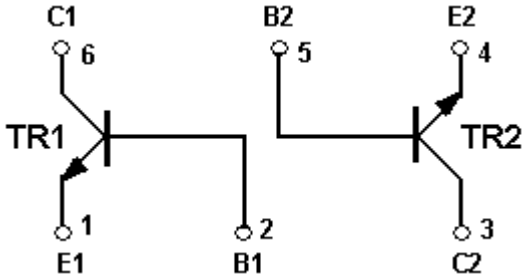
- ✧ Two TSC2411 chips in a STO-363 package
- ✧ Transistor elements are independent, eliminating interference
- ✧ Optimal for low voltage operation

Structure

- ✧ Epitaxial planar type.
- ✧ Mounting possible with SOT-323 automatic mounting machines.
- ✧ Complementary to TSA1036DCU6

Ordering Information

Part No.	Packing	Package	Marking
TSC2411DCU6	3kpcs / reel	SOT-363	1PR



Absolute Maximum Rating (Ta = 25 °C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	60V	V
Collector-Emitter Voltage	V_{CEO}	40V	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	0.6	A
Collector Power Dissipation (note)	P_D	200 (total)	mW
Operating Junction Temperature	T_J	+150	°C
Operating Junction and Storage Temperature Range	T_{STG}	- 55 to +150	°C

Note: 1. 150mW per element must not be exceeded.

Electrical Characteristics (Ta = 25 °C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Voltage	I_C = 100uA, I_E = 0	BV_{CBO}	60	--	--	V
Collector-Emitter Breakdown Voltage	I_C = 1mA, I_B = 0	BV_{CEO}	40	--	--	V
Emitter-Base Breakdown Voltage	I_E = 10uA, I_C = 0	BV_{EBO}	6	--	--	V
Collector Cutoff Current	V_{CE} = 35V, V_{EB} = 0.4V	I_{CE}	--	--	0.1	uA
Collector-Emitter Saturation Voltage	I_C / I_B = 150mA / 15mA	$V_{CE(SAT)1}$	--	--	0.4	V
Collector-Emitter Saturation Voltage	I_C / I_B = 500mA / 50mA	$V_{CE(SAT)2}$	--	0.20	0.75	V
DC Current Transfer Ratio	V_{CE} = 1V, I_C = 100uA	h_{FE} 1	20	--	--	
	V_{CE} = 1V, I_C = 1mA	h_{FE} 2	40	--	--	
	V_{CE} = 1V, I_C = 10mA	h_{FE} 3	80	--	--	
	V_{CE} = 1V, I_C = 150mA	h_{FE} 4	82	--	390	
	V_{CE} = 2V, I_C = 500mA	h_{FE} 5	40	--	--	
Transition Frequency	V_{CE} =5V, I_C=20mA, f=100MHz	f_T	--	250	--	MHz
Output Capacitance	V_{CB} = 5V, f=1MHz	Cob	--	6	--	pF

Note : pulse test: pulse width <=380uS, duty cycle <=2%

Electrical Characteristics Curve

Figure 1. Current Gain vs Collector Current

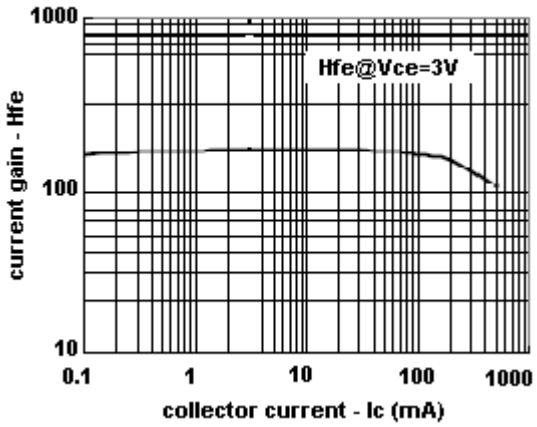


Figure 2. Saturation Voltage vs Collector Current

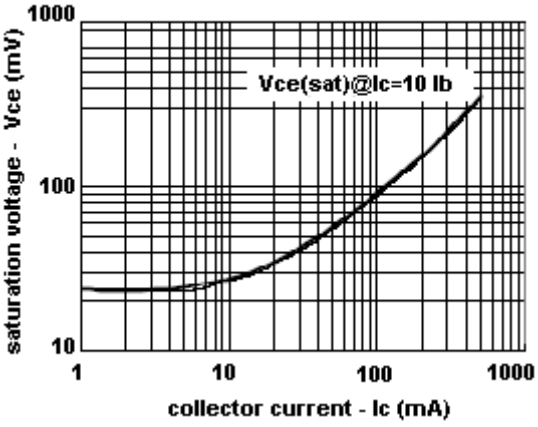


Figure 3. Saturation Voltage vs Collector Current

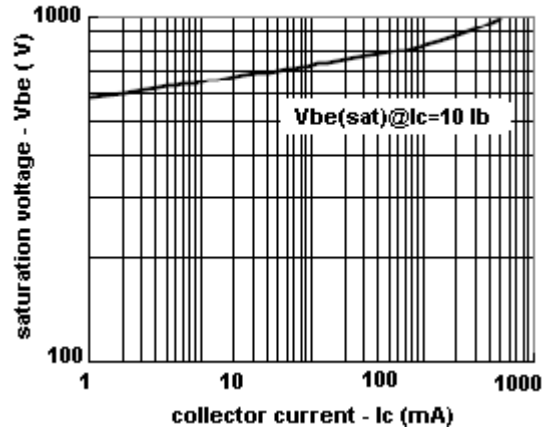


Figure 4. Power Derating Curves

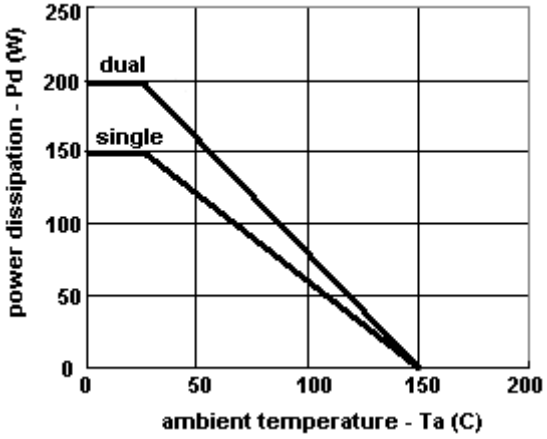
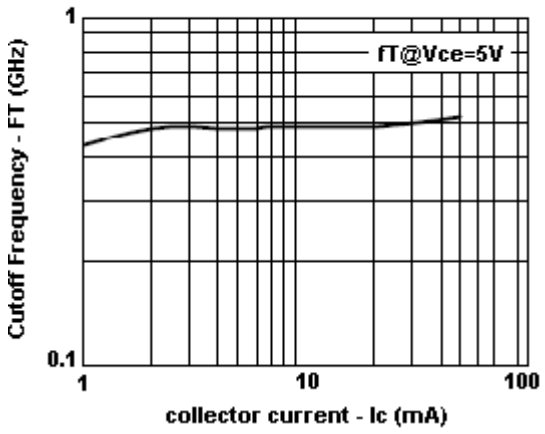
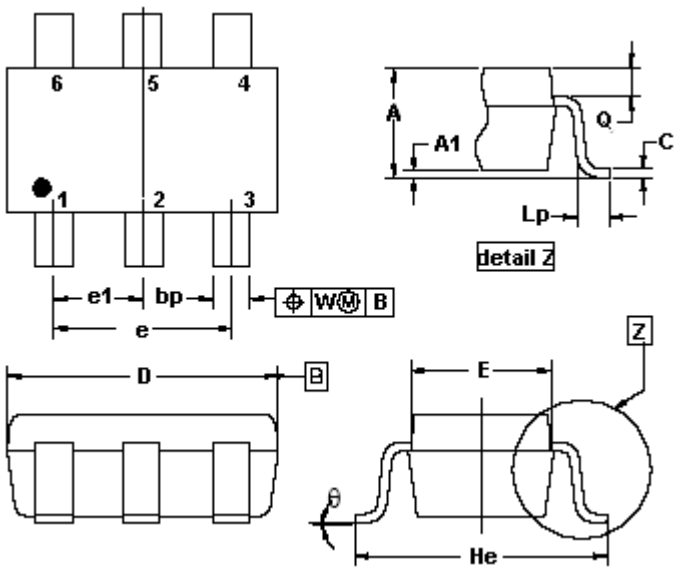


Figure 5. Cutoff Frequency vs Collector Current



SOT-363 Mechanical Drawing



SOT-363 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.80	1.10	0.031	0.043
A1	--	0.10	--	0.004
bp	0.10	0.30	0.004	0.012
C	0.10	0.25	0.004	0.010
D	1.80	2.20	0.071	0.087
E	1.15	1.35	0.045	0.053
e	1.30 (typ)		0.052 (typ)	
e1	0.65 (typ)		0.026(typ)	
He	2.00	2.20	0.079	0.087
Lp	0.10	0.3	0.004	0.012
Q	0.20 (typ)		0.008 (typ)	
W	0.20 (typ)		0.008 (typ)	
Θ	10^{o} (typ)		10^{o} (typ)	