

SOT-353 Plastic-Encapsulate Transistors

UML2N Isolated Transistor and Diode

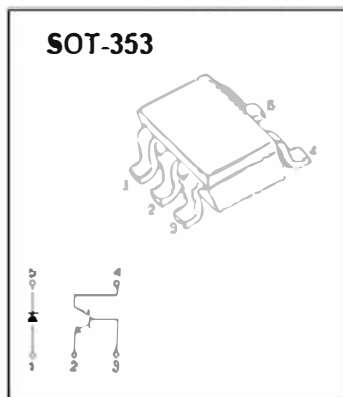
Features

- The 2SC2412K and a diodes are housed independently In a package

MARKING: L2

TR MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	60	V
V_{CE0}	Collector-Emitter Voltage	50	V
V_{EB0}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	150	mA
P_C	Collector Power Dissipation	150	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 to 150	$^{\circ}\text{C}$



DIO Maximum Ratings and Electrical Characteristics, Single Diode @ $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Limits	Unit
DC reverse voltage	V_R	80	V
Peak Reverse Voltage	V_{RM}	80	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	100	mA
Surge current	I_{SURGE}	4	A
Junction temperature	T_J	150	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

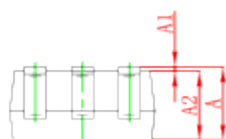
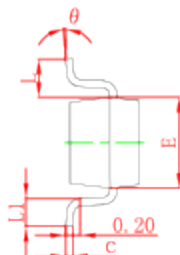
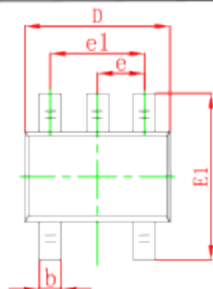
TR ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_E=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	8			V
Collector cut-off current	I_{CBO}	$V_{CE}=80V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=8V, I_C=1mA$	120		580	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_E=5mA$			0.4	V
Transition frequency	f_T	$V_{CE}=12V, I_C=2mA, f=100MHz$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB}=12V, I_E=0, f=1MHz$			3.5	pF

DIO Electrical Ratings @Ta=25°C

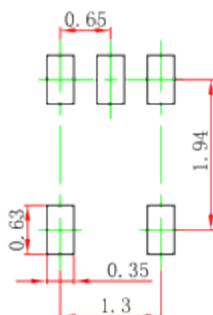
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F			1.2	V	$I_F=100mA$
Reverse current	I_R			0.1	μA	$V_R=70V$
Capacitance between terminals	C_T			3.5	pF	$V_R=8V, f=1MHz$
Reverse Recovery Time	t_{rr}			4	ns	$V_R=8V, I_F=5mA, R_L=50\Omega$

SOT-353 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.350	1.000	0.014	0.039
b	0.150	0.350	0.006	0.014
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.250	0.400	0.010	0.016
theta	0°	9°	0°	9°

SOT-353 Suggested Pad Layout



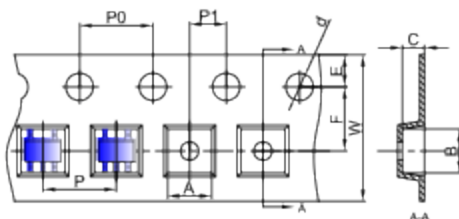
Note:

1. Controlling dimension in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

SOT-353 Embossed Carrier Tape

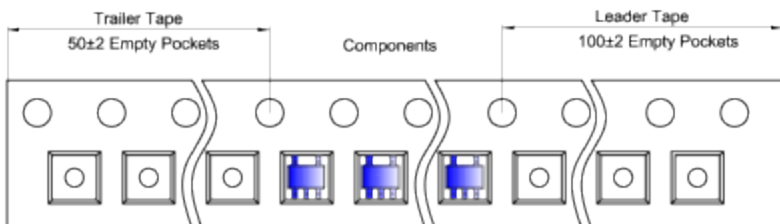


Packaging Description:

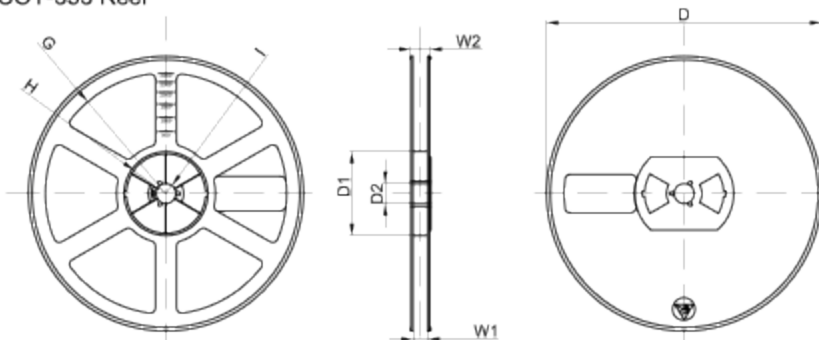
SOT-353 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-353	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	+/-0.05	+/-0.05	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

SOT-353 Tape Leader and Trailer



SOT-353 Reel



Dimensions are in millimeter							
Reel Option	D	D1	D2	G	H	I	W1
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.80	R6.50	9.50
Tolerance	+/-2	+/-1	+/-1	+/-1	+/-1	+/-1	+/-1

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	