

Digital Transistors (Built-in Resistors)

UML2N Isolated Transistor and Diode

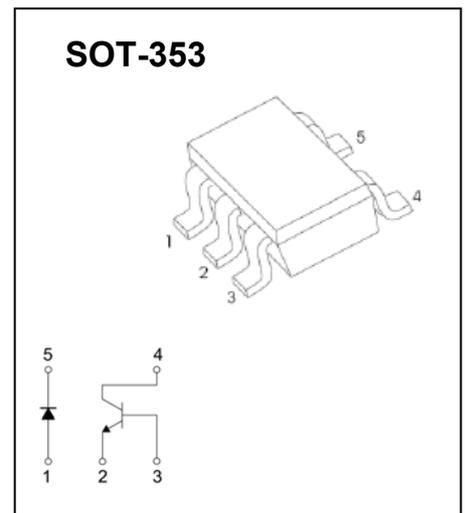
Features

- 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, T_{stg}	Operation Junction and Storage Temperature Range	-55 ~+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
Operation Junction and Storage Temperature Range	T_J, 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	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=6V, I_C=1mA$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$			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	$V_R=6V, f=1MHz$
Reverse Recovery Time	t_{rr}			4	ns	$V_R=6V,$ $I_F=5mA, R_L=50\Omega$