

General purpose transistors(Isolated transistor and diode)

FEATURES

2SC5585 and RB521S-30 chips in a package

APPLICATIONS

DC / DC converter

Motor driver

FEATURES

1) Tr : Low VCE(sat)

Di : Low VF

2) Small package

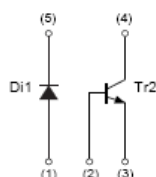
STRUCTURE

Silicon epitaxial planar transistor

Schottky barrier diode

Marking: L6

Equivalent circuit



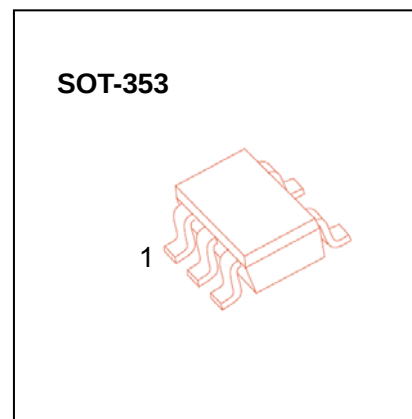
Absolute maximum ratings (Ta=25°C)

DI

Parameter	Symbol	Limits	Unit
DC reverse voltage	V_R	30	V
Mean rectifying current	I_O	200	mA
Peak forward surge current	I_{FSM}	1	A
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55~+150	°C

TR

Symbol	Parameter	Limits	Unit
V_{CBO}	Collector-Base Voltage	15	V
V_{CEO}	Collector-Emitter Voltage	12	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Dissipation	150	mW
T_j	Junction temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F			0.5	V	$I_F=200\text{mA}$
Reverse current	I_R			30	μA	$V_R=10\text{V}$

TR

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	15			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=15\text{V}, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{V}, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=2\text{V}, I_C=10\text{mA}$	270		680	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=200\text{mA}, I_B=10\text{mA}$			0.25	V
Transition frequency	f_T	$V_{CE}=2\text{V}, I_E=-10\text{mA}, f=100\text{MHz}$		320		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0\text{mA}, f=1\text{MHz}$		7.5		pF