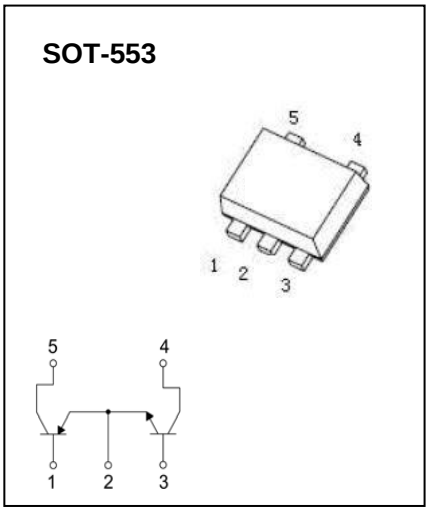
Plastic-Encapsulate Transistors

Dual Transistors (PNP+NPN)



FEATURES

- Includes a 2SA1037AK and a 2SC2412K transistor in a package
- PNP and NPN transistors have common emitters
- Mounting cost and area can be cut in half

Marking: Y1

Tr1 Absolute maximum ratings (T_a=25℃)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-150	mA
P_C	Collector Power Dissipation	150	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-50μA, 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=-50μA, 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}=-6V, 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			-0.50	V
Transition frequency	f_T	V_{CE}=-12V, I_C=-2mA, f=100MHz		140		MHz
Output capacitance	C_{ob}	V_{CB}=-12V, I_E=0, f=1MHz			5	pF

Tr2 Absolute maximum ratings (T_a=25℃)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	150	mA
P_C	Collector Power Dissipation	150	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=50μA, 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=50μA, I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=7V, 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
Output capacitance	C_{ob}	V_{CB}=12V, I_E=0, f=1MHz			3.5	pF