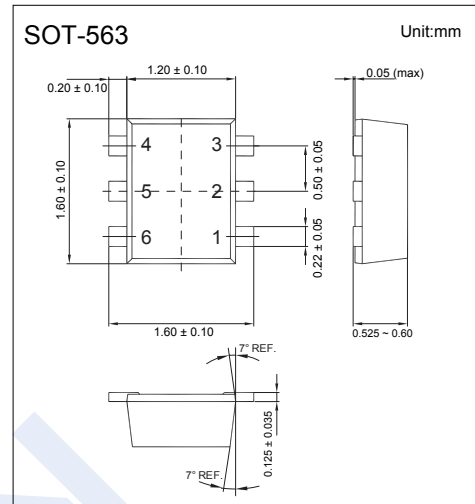
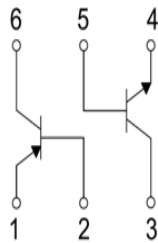


Composite Transistors

EMZ8

■ Features

- Silicon PNP epitaxial planer transistor (Tr1)
- Silicon NPN epitaxial planer transistor (Tr2)
- Both a 2SA2018 chip and 2SC2412K chip in a package



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Tr1	Tr2	Unit
Collector - Base Voltage	V _{CBO}	-15	60	V
Collector - Emitter Voltage	V _{CEO}	-12	50	
Emitter - Base Voltage	V _{EBO}	-6	7	
Collector Current - Continuous	I _C	-150	150	mA
Collector Power Dissipation	P _C	150		mW
Junction Temperature	T _J	150		°C
Storage Temperature Range	T _{stg}	-55 to 150		

Composite Transistors

EMZ8

■ Tr1 Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = -100 μA, I _E = 0	-15			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = -1 mA, I _B = 0	-12			
Emitter - base breakdown voltage	V _{EBO}	I _E = -100 μA, I _C = 0	-6			
Collector-base cut-off current	I _{CBO}	V _{CB} = -15 V, I _E = 0			-0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -6V, I _C =0			-0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =200 mA, I _B =10mA			-0.25	V
Base - emitter saturation voltage	V _{BE(sat)}	I _c =200 mA, I _B =10mA			-1.2	
DC current gain	h _{FE}	V _{CE} = -2V, I _c = -10mA	270		680	
Collector output capacitance	C _{ob}	V _{CB} = -10V, I _E =0, f=1MHz		6.5		pF
Transition frequency	f _t	V _{CE} = -2V, I _c = -10mA, f=100MHz		260		MHz

■ Tr2 Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	60			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = 1 mA, I _B = 0	50			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _C = 0	7			
Collector-base cut-off current	I _{CBO}	V _{CB} = 60 V, I _E = 0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 7V, I _C =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =50 mA, I _B =5mA			0.4	V
Base - emitter saturation voltage	V _{BE(sat)}	I _c =50 mA, I _B =5mA			1.2	
DC current gain	h _{FE}	V _{CE} = 6V, I _c = 1mA	120		560	
Collector output capacitance	C _{ob}	V _{CB} = 12V, I _E = 0, f=1MHz			3.5	pF
Transition frequency	f _t	V _{CE} = 12V, I _c = 2mA, f=100MHz		180		MHz

■ Marking

Marking	Z8
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