

SOT-23 Plastic-Encapsulate Transistors

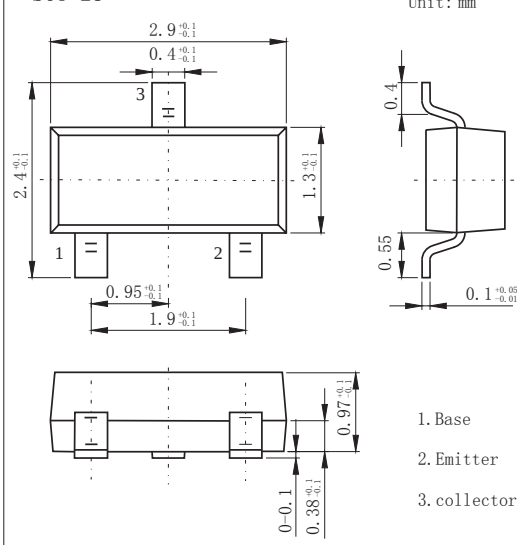
Features

- Switching transistor
- Extremely low saturation voltage
- Complementary NPN type: FM7619
- PNP Transistors

MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any

SOT-23



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-40	V
Collector - Emitter Voltage	V_{CE0}	-40	
Emitter - Base Voltage	V_{EB0}	-5	
Collector Current - Continuous (Note.1)	I_C	-1.5	A
Collector Current - Pulse	I_{CP}	-4	
Base Current	I_B	-0.5	
Collector Power Dissipation	P_C	350	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature range	T_{stg}	-55 to 150	

PACKAGE INFORMATION

Device	Package	Shipping
FM720	SOT-23	3000/Tape&Reel

Note.1: Measured under pulse conditions . Pulse width =300μs. Duty cycle≤2%.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100 \mu A, I_E = 0$	-40			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -10 mA, I_B = 0$	-40			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100 \mu A, I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -35 V, I_E = 0$			-100	nA
Collector- emitter cut-off current	I_{CES}	$V_{CE} = -35 V, I_E = 0$			-100	
Emitter cut-off current	I_{EBO}	$V_{EB} = -4 V, I_C = 0$			-100	
Collector-emitter saturation voltage (Note.1)	$V_{CE(sat)}$	$I_C = -100 mA, I_B = -10 mA$			-45	mV
		$I_C = -1 A, I_B = -50 mA$			-220	
		$I_C = -1.5 A, I_B = -100 mA$			-330	
Base - emitter saturation voltage (Note.1)	$V_{BE(sat)}$	$I_C = -1.5 A, I_B = -75 mA$			-1	V
Base - emitter voltage (Note.1)	$V_{BE(on)}$	$V_{CE} = -2 V, I_C = -1.5 A$			-1	
DC current gain (Note.1)	$h_{FE(1)}$	$V_{CE} = -2 V, I_C = -10 mA$	200			
	$h_{FE(2)}$	$V_{CE} = -2 V, I_C = -100 mA$	200		600	
	$h_{FE(3)}$	$V_{CE} = -2 V, I_C = -1 A$	150			
	$h_{FE(4)}$	$V_{CE} = -2 V, I_C = -1.5 A$	100			
	$h_{FE(5)}$	$V_{CE} = -2 V, I_C = -3 A$	20			
Turn-on Time	t_{on}	$V_{CC} = -15 V, I_C = -0.75 A, I_{B1} = I_{B2} = -15 mA$		40		ns
Turn-off Time	t_{off}			435		
Collector output capacitance	C_{ob}	$V_{CB} = -10 V, f = 1 MHz$			25	pF
Transition frequency	f_T	$V_{CE} = -10 V, I_C = -50 mA, f = 100 MHz$	150			MHz

Note.1: Pulse width =300μs. Duty cycle≤2%.

Classification of $h_{FE(2)}$

Type	FM720-L	FM720-H
Range	200-350	300-600
Marking	720	720.