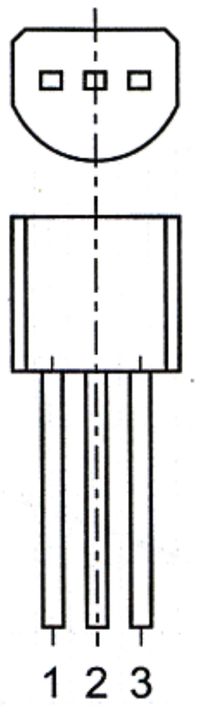
TO-92 Plastic-Encapsulate Transistors

MPSA05,06 TRANSISTOR(NPN)



TO-92

1.EMITTER

2.BASE

3.COLLECTOR

FEATURES

Power dissipation

P_{CM}: 0.625W (Tamb=25℃)

Collector current

I_{CM}: 0.5 A

Collector-base voltage

$V_{(BR)CBO}$: MPSA05 : 60V

MPSA06 : 80V

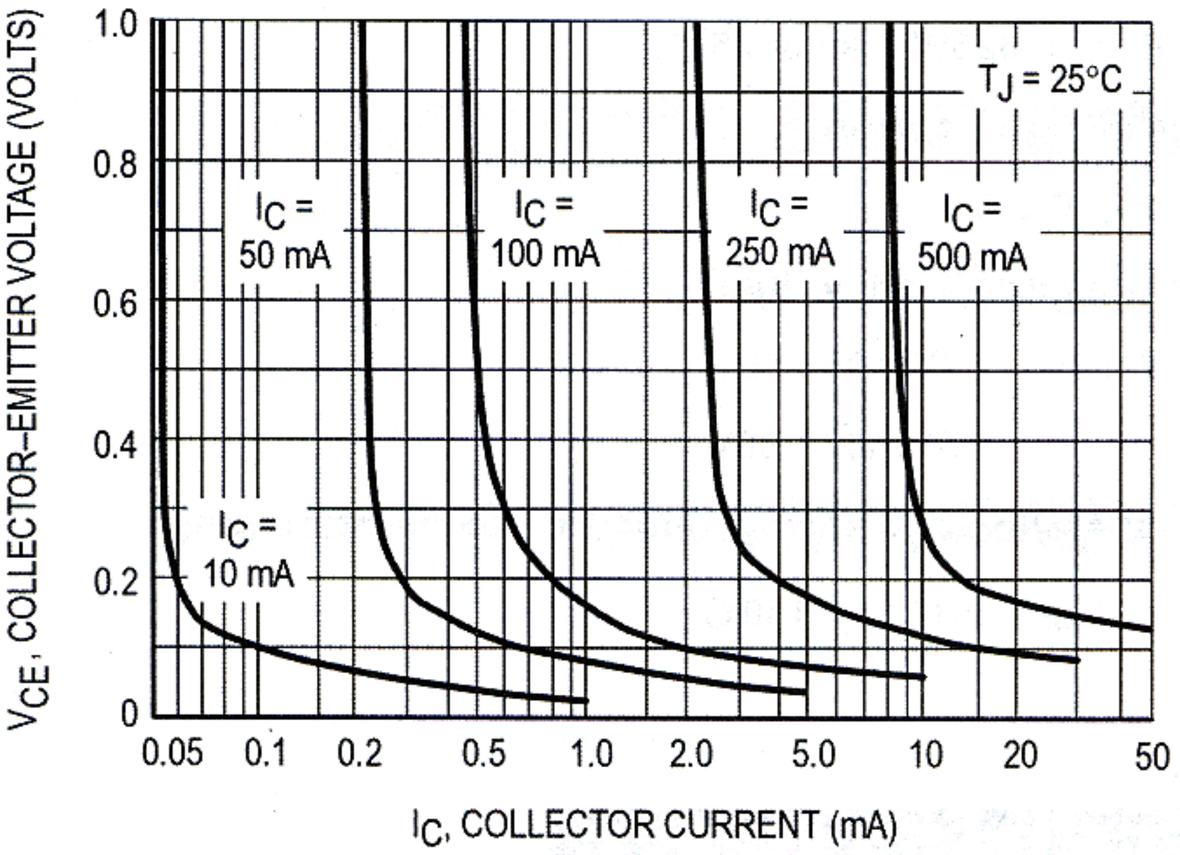
Operating and storage junction temperature range

T_J, T_{stg}: -55℃ to + 150℃

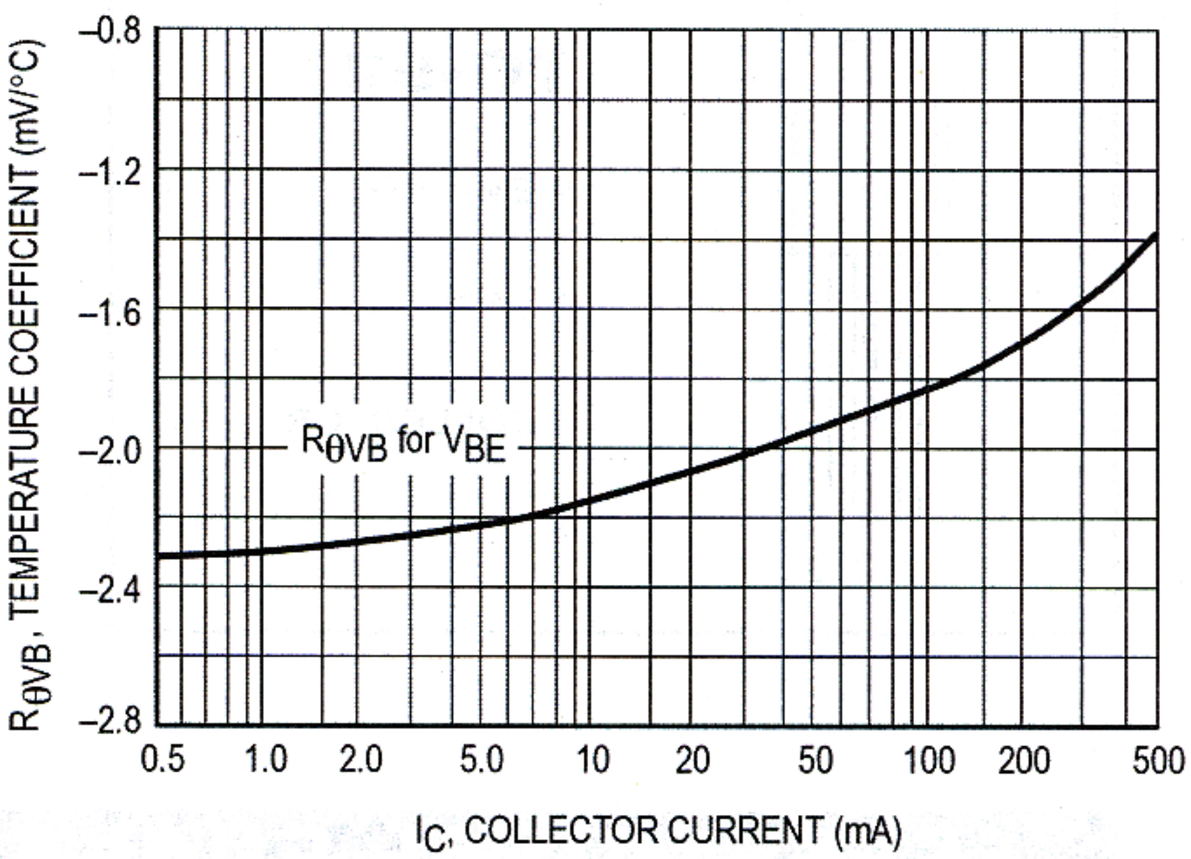
ELECTRICAL CHARACTERISTICS

(Tamb=25℃ unless otherwise specified)

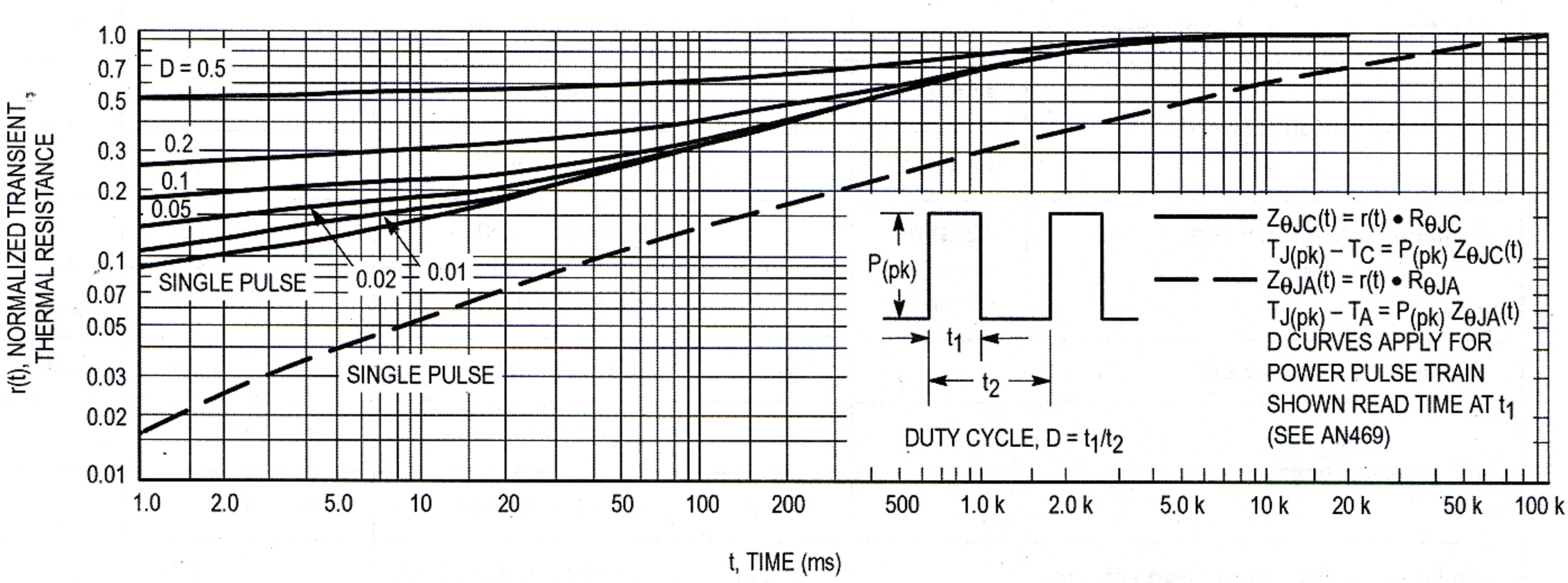
Parameter		Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	MPSA05	$V_{(BR)CBO}$	I_C= 100 μ A, I_E=0	60		V
	MPSA06			80		
Collector-emitter breakdown voltage	MPSA05	$V_{(BR)CEO}$	I_C= 1 mA, I_B=0	60		V
	MPSA06			80		
Emitter-base breakdown voltage		$V_{(BR)EBO}$	I_E= 100 μ A, I_C=0	4		V
Collector cut-off current	MPSA05	I_{CBO}	V_{CB}= 60 V, I_E=0		0.1	μ A
	MPSA06		V_{CB}= 80 V, I_E=0		0.1	
Collector cut-off current	MPSA05	I_{CEO}	V_{CE}=.50 V, I_B=0		0.1	μ A
	MPSA06		V_{CE}= 60 V, I_B=0		0.1	
Emitter cut-off current		I_{EBO}	V_{EB}= 3 V, I_C=0		0.1	μ A
DC current gain		$h_{FE(1)}$	V_{CE}= 1 V, I_C= 10 mA	100		
		$h_{FE(2)}$	V_{CE}= 1 V, I_C= 100 mA	100		
Collector-emitter saturation voltage		V_{CEsat}	I_C= 100 mA, I_B= 10 mA		0.25	V
Base-emitter voltage		V_{BE}	I_C= 100 mA, V_{CE}= 1 V		1.2	V
Transition frequency		f_T	V_{CE}= 2 V, I_C= 10 mA f =100MHz	100		MHz



Collector Saturation Region



Base–Emitter Temperature Coefficient



Thermal Response