

**Silicon PNP transistor epitaxial type  
AP940**

**[ Applications ]**

Switching and low frequency signal amplifier

**[ Feature ]**

MMBT4403 Compatible electrical characteristics

High level collector current IC= -600mA

DC current gain certified at high collector current  $hFE \geq 20$  at IC= -500mA

Suitable for small package with shrinked chip size

**[ Absolute maximum ratings (Ta=25C) ]**

Characteristic	Symbol	Maximum ratings	Unit
Collector-base voltage	VCBO	-40	V
Collector-emitter voltage	VCEO	-40	V
Emitter-base voltage	VEBO	-5	V
Collector current	IC	-600	mA
Junction temperature	Tj	150	C
Storage temperature	Tstg	-55 to 150	C

**[ Electrical characteristics (Ta=25C) ]**

Characteristic	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BVCBO	-40	-	-	V	IC= -100uA, IE= 0A
Collector-emitter breakdown voltage	BVCEO	-40	-	-	V	IC= -1mA, IB= 0A
Emitter-base breakdown voltage	BVEBO	-5	-	-	V	IE= -100uA, IC= 0A
Collector cut-off current	ICEX	-	-	-100	nA	VCE= -35V, VEB= -0.4V
Emitter cut-off current	IEBO	-	-	-100	nA	VEB= -5V, IC= 0A
DC current gain 1	hFE 1	30	-	-	-	VCE= -1V, IC= -0.1mA
DC current gain 2	hFE 2	60	-	-	-	VCE= -1V, IC= -1mA
DC current gain 3	hFE 3	100	-	-	-	VCE= -1V, IC= -10mA
DC current gain 4	hFE 4	100	-	300	-	VCE= -2V, IC= -150mA*
DC current gain 5	hFE 5	20	-	-	-	VCE= -2V, IC= -500mA*
Collector-emitter saturation voltage 1	VCE(sat) 1	-	-	-0.4	V	IC= -150mA, IB= -15mA*
Collector-emitter saturation voltage 2	VCE(sat) 2	-	-	-0.75	V	IC= -500mA, IB= -50mA*
Base-emitter saturation voltage 1	VBE(sat) 1	-0.75	-	-0.95	V	IC= -150mA, IB= -15mA*
Base-emitter saturation voltage 2	VBE(sat) 2	-	-	-1.3	V	IC= -500mA, IB= -50mA*
Transition frequency	fT	200	-	-	MHz	VCE= -10V, IE= 20mA
Collector output capacitance	Cob	-	-	8.5	pF	VCB= -10V, f= 1MHz
Collector input capacitance	Cib	-	-	30	pF	VEB= -0.5V, f= 1MHz
Delay time	td	-	-	15	ns	VCC= -30V, VBE= 2V
Rise time	tr	-	-	20	ns	IC= -150mA, IB= -15mA
Storage time	tstg	-	-	225	ns	VCC= -30V, IC= -150mA
Fall time	tf	-	-	30	ns	IB1= -IB2= -15mA

\*pulse test

Notice 1) These are measured data of transistors assembled by PHENITEC SEMICONDUCTOR Corp. and are for reference only.

Notice 2) The contents described herein are subject to change without notice.

