

# RF SWITCHING MOSFET

(KTK920T, KTK920U, KTK919S)



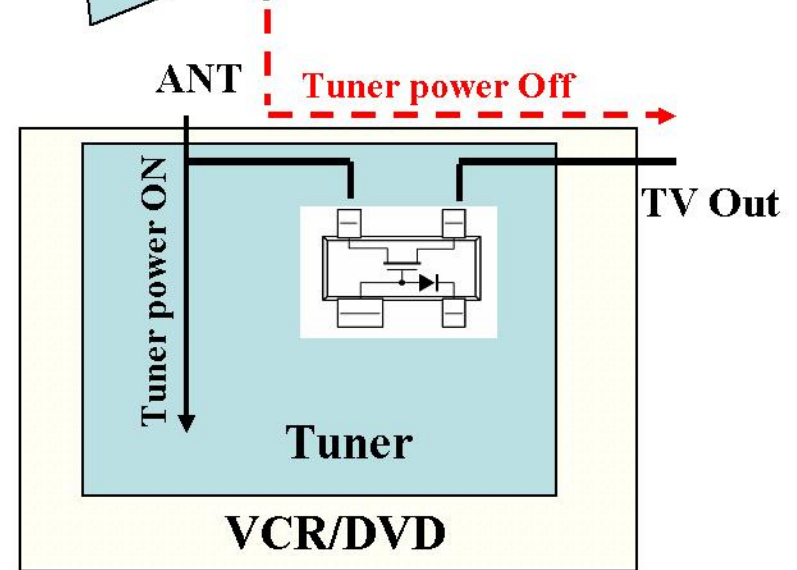
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1) Features

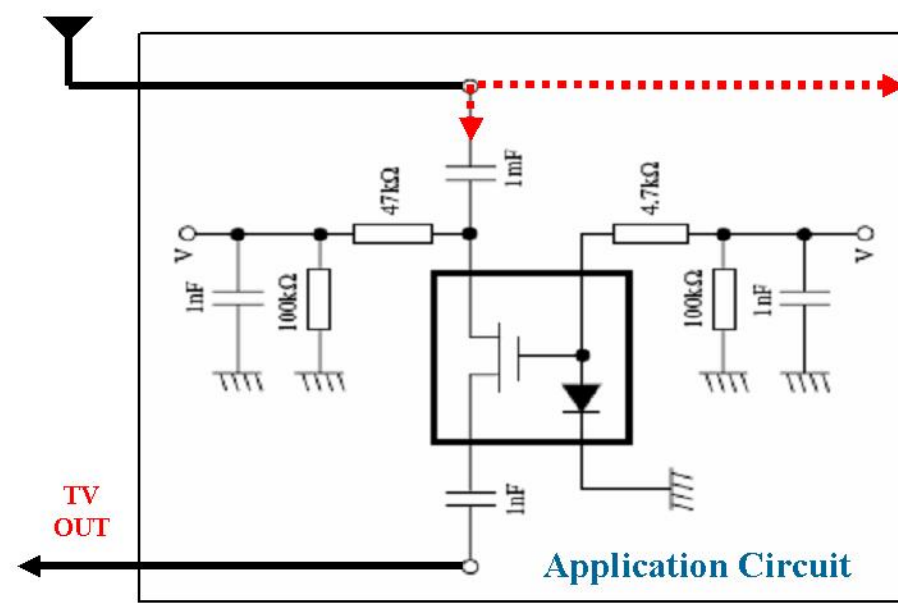
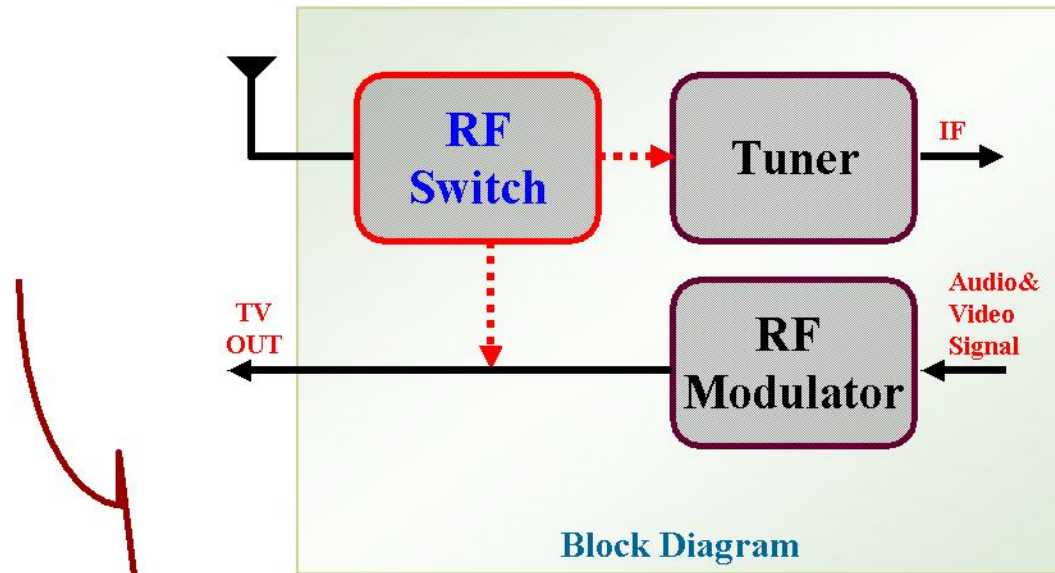
- ▶ RF switching MOSFET (Depletion type)
  - Zero power switching.
- ▶ Built-in bias diode.
- ▶ Low loss. (1dB)
- ▶ High isolation.(30dB)
- ▶ Operating Frequency : ~900MHz

**Zero Power Switching**  
 → Tuner's power is unnecessary for antenna switching



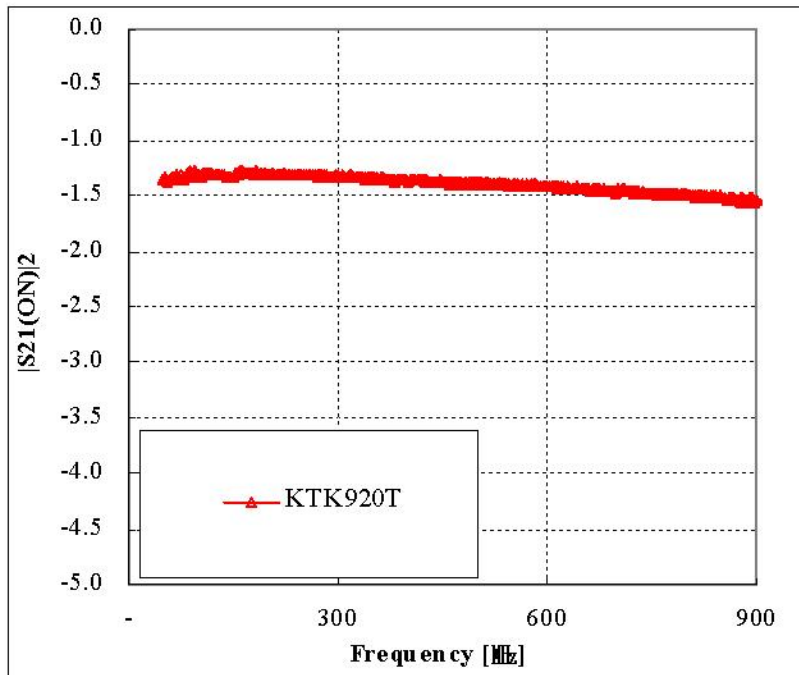
2) Package

		
TSQ (2.9*1.6*0.7mm <sup>3</sup> )	USQ (2.0*1.25*0.9mm <sup>3</sup> )	SOT-23 (2.9*1.3*1.0mm <sup>3</sup> )



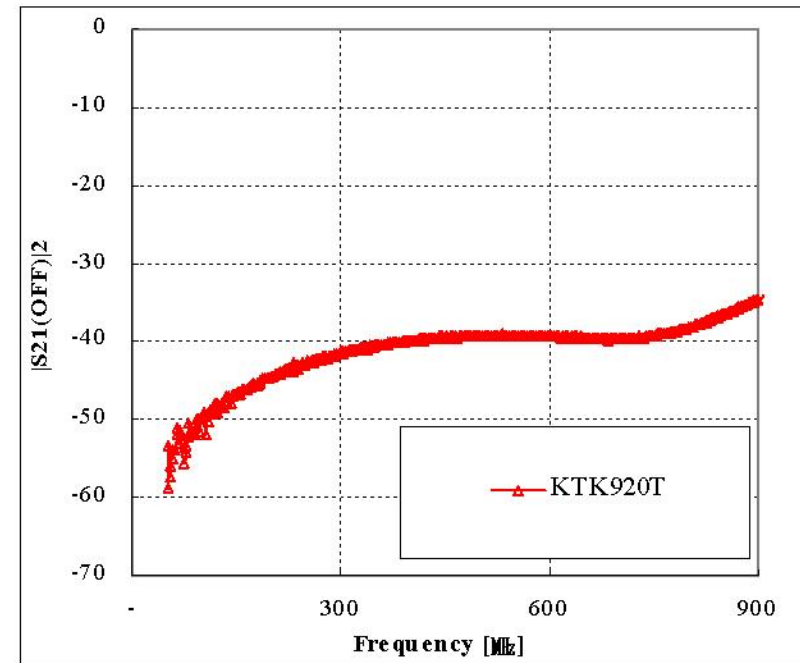
1)  $|S_{21(ON)}|^2$

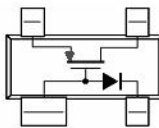
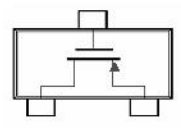
$ S_{21(ON)} ^2$ [dB]		
$V_{SC}=0V,$ $f=100MHz$	$V_{SC}=0V,$ $f=500MHz$	$V_{SC}=0V,$ $f=900MHz$
-1.32dB	-1.38dB	-1.54dB



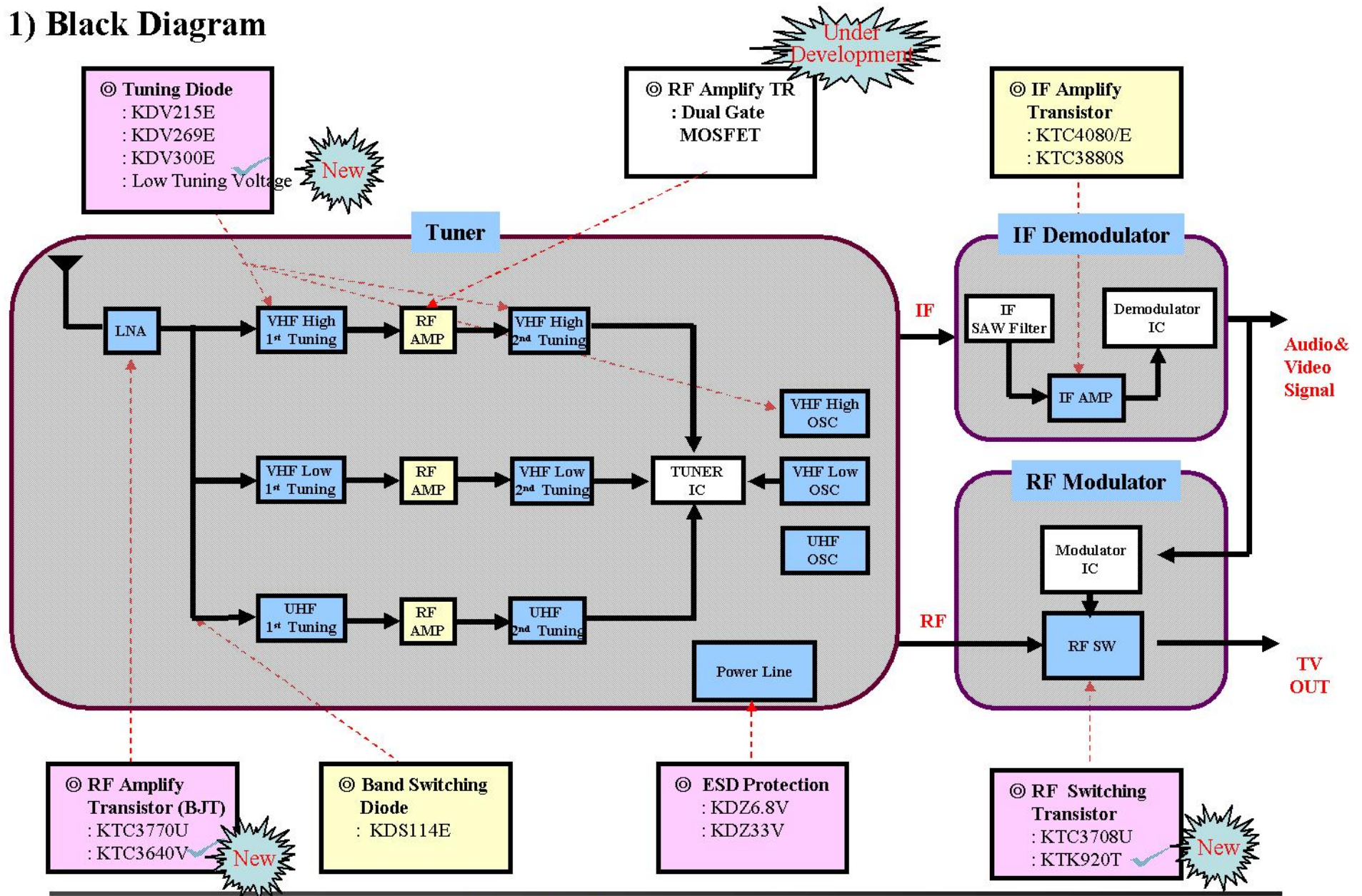
2)  $|S_{21(OFF)}|^2$

$ S_{21(OFF)} ^2$ [dB]		
$V_{SC}=5V,$ $f=100MHz$	$V_{SC}=5V,$ $f=500MHz$	$V_{SC}=5V,$ $f=900MHz$
-49.1dB	-39.2dB	-34.6dB



Type No	Electrical Characteristics		Package	Equivalent Circuit
	$IS_{21(ON)}  ^2$	$IS_{21(OFF)}  ^2$		
KTK920T	Max 2dB	Min 30dB	TSQ (2.9*1.6*0.7mm <sup>3</sup> )	
KTK920U			USQ (2.0*1.25*0.9mm <sup>3</sup> )	
KTK919S	Max 3dB	Min 30dB	SOT-23 (2.9*1.3*1.0mm <sup>3</sup> )	

1) Black Diagram



**2) Road Map**

Block	Device Name	'06. 1Q			'07. 2Q			'07. 3Q			Remark
		01	02	03	04	05	06	07	08	09	
Tuning & OSC (Varicap Diode)	KDV215E KDV269E KDV300E	M/P	-	-	-	-	-	-	-	-	-
	KDV210E	E/S		M/P	-	-	-	-	-	-	UHF Band
	KDV260E	→			E/S		M/P	-	-	-	VHF (Low) Band
	KDV290E	→			E/S		M/P	-	-	-	VHF (High) Band
ESD Protection (Zener Diode)	KDZ6.8E	M/P	-	-	-	-	-	-	-	-	
	KDZ33E	E/S		M/P	-	-	-	-	-	-	-
ANT & Modulator (RF Transistor)	KTC3708U	M/P	-	-	-	-	-	-	-	-	
	KTK920T	→		E/S		M/P	-	-	-	-	-
LNA & RF AMP (RF Transistor)	KTK909T	→								E/S	-
	KTK1208T	→									4Q End.