

TONE DETECTOR & SUPPRESSOR Signaling Tone

Adaptive Digital Technologies, Inc.

PRODUCT DESCRIPTION

The Adaptive Digital Technologies Signaling Tone detector is a carrier class Signaling Tone detector that provides exceptional channel densities. The ADT Signaling Tone Detector detects Signaling tones such as DTMF, MF R1, R2 Forward, R2 Reverse, Call Progress signals. Adaptive Digital's proprietary algorithm is robust enough to meet Bellcore GR-506, and ITU Q455 recommendations while using few CPU cycles.

Adaptive Digital's proprietary **DTMF** algorithm at less than one half the CPU utilization measured in MIPS (Millions of Instructions Per Second) offers more than twice the channel density compared with the nearest competitor while maintaining strict compliance with industry specifications Bellcore/Telcordia GR506 and ITU Q455.

An optional DTMF suppressor is available to suppress DTMF tones in Voice-Over-Packet systems that employ tone passing via out-of-band signaling. This is useful when a low rate speech compression algorithm is unable to pass the DTMF tones without significant distortion.

FEATURES

Detector

- eXpress DSP compliant
- ITU Q.24 compliant
- Meets Bellcore GR506, ITU Q455 specifications
- Robust detection
- Low per-channel memory requirements
- Low false alarm rate
- C-callable
- Designed for multi-channel operation
- Programmable Frame Size

Suppressor

- Rapid tone suppression
- Minimal distortion to speech during false early detection
- C-Callable
- Designed for multi-channel operation



Strategic member of the TI Third Party Network



eXpressDSP™ Compliant

AVAILABILITY

ADT Tone Detect/Suppress is available on the TMS320™ DSP Family C54x™DSP, C55x™DSP, & C64x™DSP Generations

SPECIFICATIONS

C54x

All Memory usage is given in units of 16 bit-word.

Function	LOW MIPS				LOW Memory			
	MIPS Per Channel	Program Memory	Data Memory	Per-Channel Data Memory	MIPS Per Channel	Program Memory	Data Memory	Per-Channel Data Memory
DTMF Detect	0.83	607	40	55	0.36	601	1704	72
MFR1Detect	0.69	587	66	55	0.31	598	1626	72
MFR2_FDetect	0.92	551	60	55	0.58	492	828	72
MFR2_RDetect	0.92	551	60	55	0.58	492	828	72
<i>CprgDetect</i>	0.55	610	32	55	0.25	576	1496	72
<i>Common</i>	---	689	16	0	---	597	16	0
<i>Suppress</i>	0.22	398	1680	0	0.22	368	0	0



Last update: 06/21/2005

C55x

All Memory usage is given in units of byte.

Function	MIPS Per Channel	Program Memory	Data Memory	Per-Channel Data Memory
DTMF Detect	0.27	1311	3774	152
MFR1Detect	0.22	1228	3256	152
MFR2_FDetect	0.46	1133	1660	152
MFR2_RDetect	0.46	1133	1660	152
<i>CprgDetect</i>	0.20	1290	2996	152
<i>Common</i>	---	1369	32	0
<i>Suppress</i>	0.17	598	0	0

_____ Last update: 06/21/2005

C64x

All Memory usage is given in units of byte.

Function	LOW MIPS				LOW Memory			
	MIPS Per Channel	Program Memory	Data Memory	Per-Channel Data Memory	MIPS Per Channel	Program Memory	Data Memory	Per-Channel Data Memory
DTMF Detect	0.42	3642	80	110	0.30	2176	3710	164
MFR1Detect	0.35	3522	132	110	0.22	1440	3272	164
MFR2_FDetect	0.46	3306	132	110	0.33	1248	1736	164
MFR2_RDetect	0.46	3306	132	110	0.33	1248	1736	164
<i>CprgDetect</i>	0.28	3660	64	110	0.18	1408	2992	164
<i>Common</i>	---	4134	32	0	---	2592	0	0
<i>Suppress</i>	0.38	1056	3360	0	0.38	1056	0	0

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FUNCTION

DTMF_ADT_Init(. . .)
MFR1_ADT_Init(. . .) MFR1_ADT_toneDetect(. . .)
MFR2_F_ADT_Init(. . .) MFR2_F_ADT_toneDetect(. . .)
MFR2_R_ADT_Init(. . .) MFR2_R_ADT_toneDetect(. . .)
CPRG_ADT_Init(. . .) CPRG_ADT_toneDetect(. . .)
DTMF_ADT_toneDetect(. . .) DTMF_ADT_toneSuppress(. . .)

CONTACT INFORMATION

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